

BASIC DETAILS:

Subject:	INTERACCIÓN HOMBRE MÁQUINA		
Id.:	33426		
Programme:	DOBLE GRADO EN INGENIERÍA INFORMÁTICA Y BIOINFORMÁTICA		
Module:	GESTION DE LA INFORMACION Y EL CONOCIMIENTO		
Subject type:	OBLIGATORIA		
Year:	3	Teaching period:	Primer Cuatrimestre
Credits:	3	Total hours:	75
Classroom activities:	36	Individual study:	39
Main teaching language:	Inglés	Secondary teaching language:	Castellano
Lecturer:	DE GRACIA IGELMO, IÑIGO (T)	Email:	idegracia@usj.es

PRESENTATION:

Human-Computer Interaction (HCI) is the study of the principles and methods with which one builds effective interfaces for users. Currently it is more known as user experience or UX. This course will introduce computer science students to the theory and practice of UX design. The course will be very practical and we will create a complete specification for a digital product. The teams will need to do research, prototyping and to iterate on the results.

PROFESSIONAL COMPETENCES ACQUIRED IN THE SUBJECT:

General programme competences	G02	Innovative capacity to propose and find new and efficient ways to undertake any task and/ or function within the professional environment - highly motivated by quality.
	G03	Capacity to work in multidisciplinary teams to achieve common objectives, placing group interests before personal ones.
	G10	Critical and analytical capacity when assessing information, data and courses of action.
	G12	Capacity to undertake professional activities with integrity, respecting social, organisational and ethical norms.
	G13	Capacity to use individual learning strategies aimed at continuous improvement in professional life and to begin further studies independently.
	G14	Capacity for abstraction to handle various complex knowledge models and apply them to examining and solving problems.
	G15	Capacity to structure reality by means of linking objects, situations and concepts through logical mathematical reasoning.
Specific programme competences	E01	Capacity to understand the engineering profession and commitment to serve society under the corresponding professional code of conduct.
	E02	Capacity to apply the intrinsic engineering principles based on mathematics and a combination of scientific disciplines.
	E03	Capacity to recognise the technical principles and apply the appropriate practical methods satisfactorily to analyse and solve engineering problems.
	E08	Capacity to communicate productively with clients, users and colleagues both orally and in writing, so as to pass on ideas, solve conflicts and achieve agreements.
	E10	Capacity to understand and assess the impact of technology on individuals, organisations, society and the environment, including ethical, legal and political factors, recognising and applying the pertinent standards and regulations. s éticos, legales y políticos, reconociendo y aplicando los estándares y regulaciones oportunos
	E12	Capacity to manage complexity through abstraction, modelling, 'best practices', patterns, standards and the use of the appropriate tools.
	E13	Capacity to identify, assess and use current and emerging technologies, considering how they apply in terms of individual or organisational needs.
	E17	Capacity to identify and analyse user needs with the intention of designing effective, usable IT solutions which can be incorporated into the user's operating environment.

PRE-REQUISITES:

This course will be delivered in English. Academic reading and writing skills are expected from students.

SUBJECT PROGRAMME:

Subject contents:

1 - Introduction
1.1 - Methodology
1.2 - Assignment
1.3 - Teams
2 - Design
2.1 - Intro
2.2 - Value proposition
2.3 - Business model canvas
2.4 - Customer journey
3 - Research
3.1 - Product - market fit interview
3.2 - Internet search for competition / alternatives. Grab the good ideas.
3.3 - Problem interview
4 - UX design
4.1 - Intro
4.2 - Usability
4.3 - From HCI to modern UX
4.4 - Information architecture
4.5 - Interaction
5 - Prototyping architecture
5.1 - Structure
5.2 - Flow
6 - Prototyping layout
6.1 - Patterns
6.2 - Wireframes
7 - Testing
7.1 - Paper test
8 - Prototyping UI
8.1 - Mock ups
8.2 - Animation
9 - Testing UI
9.1 - User tests with advanced mockups
10 - Deliverables
10.1 - You are always selling

Subject planning could be modified due unforeseen circumstances (group performance, availability of resources, changes to academic calendar etc.) and should not, therefore, be considered to be definitive.

TEACHING AND LEARNING METHODOLOGIES AND ACTIVITIES:

Teaching and learning methodologies and activities applied:

During this course a variety of teaching methods will be used including lectures, class discussions, case studies, and group work. One of the main requirements of this course is to complete a group work project and to present it to the class. Another important requirement is to participate actively in class and to contribute to discussion about the topics being analyzed.

Student work load:

Teaching mode	Teaching methods	Estimated hours
Classroom activities	Master classes	7
	Other theory activities	2
	Practical exercises	10
	Practical work, exercises, problem-solving etc.	6

	Debates	5
	Coursework presentations	3
	Assessment activities	3
Individual study	Tutorials	3
	Individual study	11
	Individual coursework preparation	10
	Group coursework preparation	5
	Research work	5
	Compulsory reading	5
	Total hours:	75

ASSESSMENT SCHEME:

Calculation of final mark:

Written tests:	30 %
Individual coursework:	30 %
Group coursework:	30 %
Attendance and active participation::	10 %
TOTAL	100 %

*Las observaciones específicas sobre el sistema de evaluación serán comunicadas por escrito a los alumnos al inicio de la materia.

BIBLIOGRAPHY AND DOCUMENTATION:

Basic bibliography:

NORMAN, Donald A.. The Design of Everyday Things.
KRUG Steve. Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability.
HALL, Erika; ZELDMAN, Jeffrey. Just Enough Research.

Recommended bibliography:

GOTHELF, Jeff; SEIDEN, Josh. Lean UX: Applying Lean Principles to Improve User Experience
WEINSCHENK, Susan M.. 100 Things Every Designer Needs to Know about People.

Recommended websites: