ACADEMIC PROGRAM

UX FUNDAMENTALS

B.F.A. IN **COMPUTER SCIENCE**

MODALITY: ON CAMPUS

ACADEMIC YEAR: 2022-2023

Name of the course:	UX Fundamentals
Degree :	Computer Science
Location:	Centro Universitario de Tecnología y Arte Digital
Area:	Multidisciplinary Fundamentals
Year:	3º
Teaching period:	2
Type:	OB
ECTS credits:	3
Teaching modality:	On campus
Language:	English
Lecturer / Email	-
Web page:	http://www.u-tad.com/

SUBJECT DESCRIPTION

Area description

This area refers to the study and practice of the set of communication techniques and skills. In the subjects that belong to this area, content related to philosophical foundations, knowledge of the environment, the philosophy of innovation, business ethics, design and social responsibility, sociology of communication, etc. will be covered in relation to the humanist and generalist orientation of the degree. In addition, the relationship of this knowledge with artistic development will be addressed.

Subject description

This subject refers to the study and practice of the set of techniques and practices to design and develop user interfaces that offer the user a friendly, intuitive experience. The software must not only be developed effectively, but must also help make its use by the user simple and effective, intuitive and friendly. To do this, in a theoretical and practical way, the student will acquire the necessary knowledge to be able to build software that is user-friendly.

COMPETENCIES AND LEARNING OUTCOMES

Competencies

BASIC AND GENERAL SKILLS

GC10 Be able to work in an international context, as well as in diverse and multicultural environments.

GC11 Manage basic skills for interpersonal relations.

GC12 Express a critical and self-critical sense and the ability to analyze in order to evaluate different alternatives.

GC13 Valuing an ethical sense at work.

GC14 Knowing how to work in a team in multidisciplinary environments.

GC15 Being able to organize and plan.

GC16 - Be able to express oneself correctly in oral and written form.

GC18 - Managing information appropriately.

GC19 - Knowing how to make decisions and solve problems in the professional field.

CB1 That students have demonstrated knowledge and understanding in an area of study that starts from the basis of general secondary education, and is usually at a level that, although it is supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study.

CB2 Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defense of arguments and problem solving within their field of study.

CB3 That students have the ability to gather and interpret relevant data (usually within their area of study) in order to make judgements that include reflection on relevant social, scientific or ethical issues.

CB4 Students are able to convey information, ideas, problems and solutions to both specialist and non-specialist audiences.

CB5 That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

TRASVERSAL SKILLS

CT1 Deploy their knowledge, activities and values in cultural, sporting and social environments.

CT2 Show interest in acts of cooperation and civic solidarity.

SPECIFIC SKILLS

SC16 Understand the processes of the elements involved in an interactive artistic production

SC22 Understanding and communicating clearly and effectively the guidelines for the development of a project.

SC26 Understanding and knowing how to thematize the relationships between Technology - Society - Culture, in relation to the design of interactive products.

SC27 Recognizing the philosophical, social and political implications of technological designs and innovations.

SC28 Detecting the implications on ethical and legal limits of technological innovations.

Learning outcomes

Upon completion of the degree, the graduate will be able to:

- Use creative thinking techniques in the professional environment

- Propose ideas that can be transformed into designs and developments

- Analyze critically proposals related to software development

- Understand the historical environment of the current digital industry and the changes produced in society due to the inclusion of new digital media.

- To know the variety of company incorporation articles under the Spanish Law.

- To design the structure of the company with the aim of maximizing the contribution of the team.

- Relate intellectual property legislation to different scenarios (national, European and international).

- Identify the sources of relevant economic information and their content.

- Know different marketing techniques and their implications on the development of a digital entertainment product.

- Reflect on the ethical and legal limits of technological innovations.

- To interpret relevant economic, political and cultural data in the design of software design.

- To understand project management paradigms: waterfall and Agile

- To be able to sketch a project schedule and follow it using Gantt and PERT charts

- To know the principles of end user psychology

- To be able to design wireframes

- To develop a user-driven application

- To understand the function of color and shape in the development of interactive applications.

CONTENTS

Analysis of interactive experiences

Development of mock ups

Interaction with theoretical and practical contents

Conceptualization and user design

SUBJECT SYLLABUS

Topic 1: User Interfaces

1.1 Introduction to Interface design. Types of interfaces.

1.2 Introduction to User Experience

1.3 Real examples

Topic 2: Interface Design

2.1 Good practices for design

2.2 Interface development model. User-centered design.

2.3 Process to develop intuitive and attractive interfaces.

2.4 Practical experience

Topic 3: User Experience

3.1 Interaction with interfaces

3.2 Keys to developing interfaces with good user experience

3.3 Practical experience.

Topic 4: Interface Validation

4.1 Metrics and validation processes.

4.2 Usability validation test

Topic 5: Advanced Interfaces.

5.1 Tactile, immersive interfaces.

5.2 Augmented Reality, Robotics.

TRAINING ACTIVITIES AND TEACHING METHODOLOGIES

TRAINING ACTIVITIES

LEARNING ACTIVITIES	Total hours	Hours of presence
Theoretical / Expository classes	15,43	15,43
Practical classes	10,57	10,57
Tutorials	2,00	2,00
Independent study and autonomous work of the student	20,57	0,00
Elaboration of work (group or individual)	21,43	0,00
Evaluation Activities	5,00	5,00
TOTAL	75	33

Teaching methodologies

Expository method or master lesson

Case learning

Learning based on problem solving

Cooperative or collaborative learning

inquiry learning

Flipped classroom methodology

Gamification

Just in time Teaching (JITT) or classroom on time

Expository method or master lesson

Case method

Learning based on problem solving

Cooperative or collaborative learning

inquiry learning

Flipped classroom methodology

Gamification

TEMPORAL DEVELOPMENT

DIDACTIC UNITS / TOPICS TIME PERIOD

Topic 1: User Interfaces Weeks 1-2

Topic 2: Interface Design Weeks 3-4-5-6-7- 8

Topic 3: User Experience Weeks 9-10 11-12

Topic 4: Interface Validation Weeks 13

Topic 5: Advanced Interfaces Weeks 14-15

EVALUATION SYSTEM

ASSESSMENT SYSTEM	MINIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)	MAXIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)

Assessment of participation in class, exercises or projects of the course	10	30
Assessment of assignments, projects, reports, memos	10	60
Objective test	30	80

GRADING CRITERIA

ASSESSMENT SYSTEM	ORDINARY EVALUATION	EXTRAORDINARY EVALUATION
Assessment of participation in class, exercises or projects of the course	20	20
Assessment of assignments, projects, reports, memos	50	50
Objective test	30	30

General comments on the evaluations/assessments

Students' active participation and correct delivery of the practices in the form and date will be valued.

The practices will be valued:

- the quality of the work

- the ability to self-criticize and improve

- the presentation

- the effort made

Ordinary call

– The student must submit and approve the group work with a grade of five out of ten. It will count 50% of the final grade.

– The student must pass the mandatory final exam with a grade of five out of ten. He will count 30% of the final grade.

– To pass the subject, all parts must have a grade higher than 5 out of 10.

Extraordinary call

– The student must submit and approve the group work with a grade of five out of ten. It will count 50% of the final grade.

– The student must pass the mandatory final exam with a grade of five out of ten.

It will count 30% of the final grade.

– To pass the subject, all parts must have a grade higher than 5 out of 10.

• In the extraordinary call, all work completed during the course must be submitted and the exam taken.

• Any writing that the student presents (reports on practical cases, problems, exams, program comments, etc.) must be well presented, correctly written (with appropriate punctuation) and without spelling mistakes. Reports with spelling errors will not be corrected, since a university student is required to have maximum quality in their written expression.

• Despite being a strongly theoretical subject, the active participation of the student is expected and they will be encouraged to ask specific questions and show their interest in particular topics on the syllabus. The student will be encouraged to conduct specific investigations of particular technologies and have them presented and discussed in class, and students will present a design project that makes use of a particular technology.

LIST OF REFERENCES (BOOKS, PUBLICATIONS, WEBSITES):

Basic bibliography

– The Design Of Everyday Things. Don Norman. 2013

– The Humane Interface: New Directions for Designing Interactive Systems by Jef Raskin (Mar 29, 2000)

– Don't Make Me Think: A Common Sense Approach to Web Usability. Steve Krug. 2005. Pearson Professional Education

Recommended bibliography

- Handbook of Human-Computer Interaction. Martin

Helander (Editor), etc. (Editor), T.K. Landauer (Editor). 1997. North-Holland

- Usable Usability: Simple Steps for Making Stuff Better. Eric Reiss. 2012

- Emotional Design: Why We Love (or Hate) Everyday Things. Don Norman. 2005

- User experience: Principles and methods" – Yusef Hassan Montero

- "Introduction to web typography" – Francisco J. Gallardo

- "Emotional design: Why we like (or don't) everyday objects - Donald A. Norman

- "Storytelling and copywriting. How to tell the story of your company" - Anita A. Cufari

- "Usability. Stop suffering" – Daniel Torres-Burriel

- "Intelligent Design. 100 more things about people that every designer needs to know" - Susan M. Weinschenk

- "Lean UX" - Jeff Gothelf

- “Screen Typography” - Ellen Lupton

- “Designpedia” - Juan Gasca Rubio and Rafael Zaragoza Álvaro

REQUIRED MATERIALS, SOFTWARE AND TOOLS

Type of classroom
Theory classroom

Board and projection system

Materials:
It is recommended that students bring their own computer and headphones.

Internet connection

Software:
Powerpoint, doc, Excel, web