ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000874 - User Experience And Mobile Interaction

DEGREE PROGRAMME

10AZ - Master Universitario En Innovación Digital

ACADEMIC YEAR & SEMESTER

2025/26 - Semester 1

Index

Learning guide

1. Description

1.1. Subject details

Name of the subject	103000874 - User Experience And Mobile Interaction
No of credits	6 ECTS
Type	Optional/elective
Academic year ot the programme	First year
Semester of tuition	Semester 1
Tuition period	September-January
Tuition languages	English
Degree programme	10AZ - Master Universitario en Innovación Digital
Centre	10 - E.T.S. De Ingenieros Informáticos
Academic year	2025-26

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Ricardo Imbert Paredes (Subject coordinator)	D-5112	ricardo.imbert@upm.es	Tu - 15:00 - 18:00 W - 15:00 - 18:00 It is advisable to confirm by email the availability of the professor
Jose Maria Barambones Ramirez	5106	j.barambones@upm.es	M - 10:00 - 12:00 Tu - 10:00 - 12:00 Th - 12:00 - 14:00 It is advisable to confirm by email the

			availability of the professor

* The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

3. Skills and learning outcomes *

3.1. Skills to be learned

CE-DIPO01 - Capacidad para conceptualizar, diseñar y desarrollar la interacción persona-ordenador de productos y servicios innovadores

CE-DIPO03 - Habilidad para hacer conexiones entre los deseos y necesidades del consumidor o cliente y lo que la tecnología puede ofrecer

3.2. Learning outcomes

RA29 - Understand the particularities of the user experience beyond usability, considering emotions

RA30 - Understand the particularities of user-centered design in mobile platforms and ubiquitous computing

RA28 - Apply techniques and processes for prototyping, development and refinement of interactive digital systems in different technological platforms

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

4. Brief description of the subject and syllabus

4.1. Brief description of the subject

This course will be focused on designing mobile interactions with good user experience (UX). Contents of the course include: UX as a broadening of the scope of usability, design concepts, global user interfaces, designing for mobile experiences, interaction design patterns for mobile applications, mobile wireframes and prototypes and platform-specific design guidelines.

4.2. Syllabus

1. Introduction to UX and mobile interaction
2. Context and specific needs related solution
3. Design of memorable experiences
4. UX & UI: Visual principles
5. UX in the product design
6. Mobile prototyping
7. Design guidelines
8. Evaluation of the UX

5. Schedule

5.1. Subject schedule*

Week	Type 1 activities	Type 2 activities	Distant / On-line	Assessment activities
1	**1. Introduction to UX&MI** Duration: 03:00 Lecture			
2	**2. Context and specific needs related solution** Duration: 01:00 Cooperative activities **Affinity diagraming activity (needs)** Duration: 02:00 Cooperative activities			**Affinity diagraming (needs)** Group work Progressive assessment Presential Duration: 02:00
3	**2. Context and specific needs related solution** Duration: 01:00 Cooperative activities **Value proposition canvas exercise** Duration: 02:00 Cooperative activities			**Value proposition canvas exercise** Group work Progressive assessment Presential Duration: 02:00
4	**2. Context and specific needs related solution** Duration: 00:30 Lecture **Personas workshop** Duration: 02:30 Cooperative activities			**Personas workshop** Other assessment Progressive assessment Presential Duration: 02:30
5	**3. Design of memorable experiences** Duration: 00:30 Lecture **3. Design of memorable experiences** Duration: 02:00 Cooperative activities **User journey map exercise** Duration: 00:30 Cooperative activities			**User profiles, empathy map and refinement of value proposition** Group work Progressive assessment Not Presential Duration: 00:00 **User journey map exercise** Group presentation Progressive assessment Presential Duration: 00:30
6	**4. UX&UI: Visual principles** Duration: 01:00 Lecture **4. UX&UI: Visual principles** Duration: 01:00 Cooperative activities **Contrast exercise** Duration: 01:00 Cooperative activities			**Contrast exercise** Group work Progressive assessment Presential Duration: 01:00 **Assignment about color observation** Individual work Progressive assessment and Global Examination Not Presential

				Duration: 00:00
7	**4. UX&UI: Visual principles** Duration: 00:15 Lecture **4. UX&UI: Visual principles** Duration: 01:30 Cooperative activities **Mood board exercise** Duration: 01:15 Cooperative activities			**Assignment about typefaces** Individual work Progressive assessment and Global Examination Not Presential Duration: 00:00 **Mood board exercise** Group work Progressive assessment Presential Duration: 01:15
8	**5. UX in the product design** Duration: 03:00 Cooperative activities			
9	**5. UX in the product design** Duration: 03:00 Cooperative activities			**Assignment about product design** Group work Progressive assessment Presential Duration: 00:00
10	**6. Mobile prototyping** Duration: 03:00 Cooperative activities			
11	**7. Design guidelines** Duration: 00:15 Lecture **7. Design guidelines** Duration: 00:15 Lecture **Analysis of mobile apps with UX problems exercise** Duration: 02:30 Cooperative activities			**Analysis of mobile apps with UX problems** Group work Progressive assessment and Global Examination Not Presential Duration: 02:30
12	**6. Mobile prototyping** Duration: 03:00 Cooperative activities			
13	**8. UX evaluation** Duration: 00:30 Lecture **8. UX evaluation** Duration: 02:30 Cooperative activities			**Assignment about 5 seconds test** Group work Progressive assessment Presential Duration: 00:00
14	**8. UX evaluation** Duration: 00:30 Lecture **8. UX evaluation** Duration: 02:30 Cooperative activities			**Assignment about UEQ** Group work Progressive assessment Presential Duration: 00:00
15	**Mobile prototype evaluation follow up** Duration: 03:00 Additional activities			

16				
17	**Presentation of the prototype evaluation results** Duration: 03:00 Additional activities			**Mobile prototype evaluation assignment** Group work Progressive assessment Not Presential Duration: 00:00 **Student implication and participation** Other assessment Progressive assessment Presential Duration: 00:00

Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

6. Activities and assessment criteria

6.1. Assessment activities

6.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
2	Affinity diagraming (needs)	Group work	Face-to-face	02:00	1.2%	0 / 10	CE-DIPO03
3	Value proposition canvas exercise	Group work	Face-to-face	02:00	3%	0 / 10	CE-DIPO03
4	Personas workshop	Other assessment	Face-to-face	02:30	3%	0 / 10	CE-DIPO03
5	User profiles, empathy map and refinement of value proposition	Group work	No Presential	00:00	7.2%	0 / 10	CE-DIPO03
5	User journey map exercise	Group presentation	Face-to-face	00:30	7.2%	0 / 10	CE-DIPO01 CE-DIPO03
6	Contrast exercise	Group work	Face-to-face	01:00	7.2%	0 / 10	CE-DIPO01
6	Assignment about color observation	Individual work	No Presential	00:00	7.2%	0 / 10	CE-DIPO01
7	Assignment about typefaces	Individual work	No Presential	00:00	7.2%	0 / 10	CE-DIPO01
7	Mood board exercise	Group work	Face-to-face	01:15	7.2%	0 / 10	CE-DIPO03 CE-DIPO01
9	Assignment about product design	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01 CE-DIPO03
11	Analysis of mobile apps with UX problems	Group work	No Presential	02:30	7.2%	0 / 10	CE-DIPO01
13	Assignment about 5 seconds test	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO03 CE-DIPO01
14	Assignment about UEQ	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01
17	Mobile prototype evaluation assignment	Group work	No Presential	00:00	14.4%	0 / 10	CE-DIPO01
17	Student implication and participation	Other assessment	Face-to-face	00:00	6.4%	0 / 10	CE-DIPO01

6.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills

6	Assignment about color observation	Individual work	No Presential	00:00	7.2%	0 / 10	CE-DIPO01
7	Assignment about typefaces	Individual work	No Presential	00:00	7.2%	0 / 10	CE-DIPO01
11	Analysis of mobile apps with UX problems	Group work	No Presential	02:30	7.2%	0 / 10	CE-DIPO01

6.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Mobile prototype refactoring and evaluation	Group work	Face-to-face	00:00	14.4%	0 / 10	CE-DIPO01
Assignment about color observation	Individual work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01
Assignment about typefaces	Individual work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01
Assignment about 5 seconds test	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01 CE-DIPO03
Assignment about UEQ	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01
Analysis of mobile apps with UX problems	Group work	Face-to-face	00:00	7.2%	0 / 10	CE-DIPO01

6.2. Assessment criteria

Progressive evaluation

The subject is graded following a continuous assessment.

The subject's progressive evaluation consist of:

- *Individual assignments (14,4% of the final grade):* the student must complete several individual assignments related to some specific aspects of the subject. These activities **are recoverable** in the global and extraordinary evaluation, always that they had been failed (grade below 5).
- *Group assignments (79,2% of the final grade):* the purpose of the group assignments is to learn basic concepts and techniques by applying them to a product that will be developed by the students in an incremental and iterative way during the semester. That means that the assignments corresponding to the last steps (prototype refactoring, prototype evaluation, 5 seconds test and UEQ) are **the only recoverable ones**. Since these products are delivered the day before the final presentation, it is impossible to evaluate them in the global evaluation. Therefore, they will be only recoverable in the extraordinary evaluation. However, the group activity "Analysis of mobile apps with UX problems (7,2% of the final grade) is also recoverable in both the global and extraordinary evaluation, since it is not part of the whole project.

- *Student participation (6,4% of the final grade):* a critical mindset and the analysis skills from the student are valued. These activities are **not recoverable**, either in the global evaluation or in the final evaluation, since it is the student participation during the classes what it is evaluated.

The student passes the subject only if 5 or more points on 10 are obtained at the end of the course, regarding the following criteria:

FINAL GRADE = 14,4% Individual assignments + 79,2% Group assignments + 6,4% Student participation

Global evaluation

When failed during the progressive evaluation, the student may have a new opportunity to pass the subject repeating the recoverable failed parts. Since these parts cover a 21,6% of the final grade this will be the margin for passing the subject during the global evaluation.

Extraordinary evaluation

For the extraordinary term evaluation the student can repeat the following activities, only if they are graded under 5:

- The correction of the mobile HiFi prototype, taking into account the errors made and the results of the evaluation performed during the ordinary period, and its evaluation (7,2% of the final grade).
- The analysis of mobile apps with UX problems (7,2%).
- The evaluation of the HiFi prototype UX through the technique of the 5 seconds test (7,2% of the final grade).
- The evaluation of the HiFi prototype UX through the UEQ technique (7,2% of the final grade).
- The individual assignment about color observation (7,2%).
- The individual assignment about typefaces (7,2%).

Zero tolerance against fraud

If fraudulent acts are detected during the development of evaluation tests, the provisions of article 13 of the UPM Evaluation Regulations approved by the Governing Council on May 26, 2022 will apply.

7. Teaching resources

7.1. Teaching resources for the subject

Name	Type	Notes
Norman, D. (2013) The Design of Everyday Things. Zone Books	Bibliography	UX and general design essential
Griffiths, S. (2015) Mobile App UX Principles. Improving user experience and optimising conversion. Google (https://www.thinkwithgoogle.com/intl/en-gb/articles/mobile-app-ux-principles-improving-user-experience-and-optimising-conversion.html)	Bibliography	UX in mobile design
Mendoza, A (2013) Mobile User Experience. Patterns to Make Sense of it All. Morgan Kaufmann	Bibliography	UX in mobile design
Doncaster, P. (2014) The UX Five Second Rules. Guidelines for User Experience Design's Simplest Testing Technique. Elsevier	Bibliography	UX testing
Subject's Moodle site	Web resource	https://moodle.upm.es/titulaciones/oficiales/course/view.php?id=7964
Subject MS Teams group	Web resource	Live online lectures, workshops and presentations

8. Other information

8.1. Other information about the subject

Innovative Teaching Methodologies Applied in the Course

Several innovative teaching methodologies are implemented in the course (https://innovacioneducativa.upm.es/guias-pdi) with the aim of motivating and reinforcing student learning:

- **Learning by Doing:** Most sessions follow a structure of 30 minutes dedicated to presenting the theory related to the session, followed by 2 hours in which students work on a problem posed by the instructor to build a solution under their supervision. The final 30 minutes are used for students to present their solutions and conclusions, which are then discussed and debated among all the students who have worked on similar problems.
- **Design Thinking:** Topic 5.1, "UX in Product Design", is structured following a Design Sprint approach?Google Ventures? methodology for solving complex problems, developing and validating solutions within a week. The underlying process is essentially similar to Design Thinking, involving cycles of divergence and convergence: identifying numerous value opportunities within the context the students are working on, selecting the most promising one, proposing multiple alternative solutions to the identified need, selecting the best one, prototyping, and evaluating.
- **Research-Based Learning:** In Topic 4.3, "Typography", after a theoretical session introducing the fundamentals of typography and its use in digital media, students are assigned a research task on a specific typeface. They must explore its characteristics, historical and contextual background, most notable uses, and potential applications in our context.
- **Collaborative Learning:** After completing their research in Topic 4.3, students participate in a workshop-style activity as supported by Moodle. Each student is randomly assigned peers? projects to review. They assess the work using a rubric provided by the instructors and give constructive feedback. Through this process, students learn about their assigned typeface, others investigated by their classmates, and develop critical and constructive perspectives on the work.
- **Project-Based Learning:** From the beginning of the course, students work in groups to propose a project topic, understood as an original, unmet need. Throughout the course, they develop their proposal through various stages: user research and analysis, user modeling, identification of the application's usage journey, proposal

and design of a solution, implementation of high-fidelity prototypes, and evaluation of the user experience with actual users.