INTERNATIONAL CAMPUS OF EXCELLENCE

POLITÉCNICA

COORDINATION PROCESS OF
LEARNING ACTIVITIES
PR/CL/001

E.T.S. de Ingenieros
Informaticos

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000885 - E-health: Promoting Active And Healthy Ageing

DEGREE PROGRAMME

10AZ - Master Universitario En Innovación Digital

ACADEMIC YEAR & SEMESTER

2023/24 - Semester 1

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Learning guide

1. Description

1.1. Subject details

Name of the subject	103000885 - E-Health: Promoting Active And Healthy Ageing
No of credits	4.5 ECTS
Type	Optional
Academic year ot the programme	Second year
Semester of tuition	Semester 3
Tuition period	September-January
Tuition languages	English
Degree programme	10AZ - Master Universitario en Innovación Digital
Centre	10 - Escuela Tecnica Superior De Ingenieros Informaticos
Academic year	2023-24

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Cristian Moral Martos	5110	cristian.moral@upm.es	W - 10:00 - 14:00 F - 10:00 - 12:00 Please, ask for an appointment
Elena Villalba Mora (Subject coordinator)	5110	elena.villalba@upm.es	M - 10:00 - 12:00 W - 10:00 - 12:00 F - 10:00 - 12:00 Please, ask for an appointment

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

member in charge.

3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

The subject - recommended (passed), are not defined.

3.2. Other recommended learning outcomes

- User Centred Design. User Experience basic knowledge.

4. Skills and learning outcomes *

4.1. Skills to be learned

CB08 - Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios

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

CE-DIPO02 - Capacidad para evaluar la interacción persona-ordenador de productos y servicios de alto valor innovador

CE-DIPO04 - Capacidad para analizar las necesidades de información que se plantean en un entorno y llevar a cabo en todas sus etapas el proceso de diseño centrado en el usuario

4.2. Learning outcomes

RA14 - Apply the acquired knowledge in real contexts

RA37 - Understand the term usability and its attributes

RA15 - Understand how user-centred design methods are used in non-academic environments

RA19 - Apply techniques for designing and implementing prototypes of different fidelity levels

RA18 - Apply techniques for modelling the context of use

RA40 - Evaluate the usability of prototypes

* 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.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

The main focus of this subject is achieving an understanding of the necessary models, techniques and architectures that allow the development of interactive systems in the E-health domain. Topics to be covered include eHealth, eInclusion, co-production of health, empowerment, social innovation, social networks, serious games, and participation in society.

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5.2. Syllabus

1. Active and Health Ageing

    1.1. Course introduction

    1.2. Definition and frameworks

2. Clinical perspective. Intrinsic capacity and frailty

3. Political perspective

4. Technological perspective

5. Social and personal perspective

6. Active and Healthy Ageing Project

6. Schedule

6.1. Subject schedule*

Week	Classroom activities	Laboratory activities	Distant / On-line	Assessment activities
1	**1. Active and Healthy Ageing: 1.1 Course introduction 1.2. Definitions and frameworks** Duration: 02:00 Lecture			
2	**2. Clinical perspective.** Duration: 02:00 Lecture			
3	**6. Introduction to AHA project. 6.1 Topic choice** Duration: 02:00 Cooperative activities			
4	**3. Political perspective.** Duration: 02:00 Lecture			
5	**5.Technological perspective I** Duration: 02:00 Lecture			**Assignment of political and technological perspective** Individual presentation Continuous assessment and final examination Not Presential Duration: 04:00
6	**6. AHA Project. 6.1. Topic choice and planning of context of use observation** Duration: 02:00 Additional activities			
7	**4. Social and personal perspective** Duration: 02:00 Lecture			**Assessment. AHA Project: Planification of the observation of the context of use [NON RECOVERABLE]** Group work Continuous assessment Not Presential Duration: 02:00
8	**5. Technological perspective II** Duration: 02:00 Lecture			
9	**6. AHA project. 6.2 Observation, analysis and specification of context of use** Duration: 02:00 Additional activities			
10				**Assessment. AHA Project: Context of use [NON RECOVERABLE]** Group presentation Continuous assessment Presential Duration: 02:00

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11	**6. AHA Project. 6.3 Design and implementation of a prototype** Duration: 02:00 Additional activities			
12	**6. AHA Project. 6.3 Design and implementation of a prototype. Tutoring.** Duration: 02:00 Additional activities			
13				**Assessment. AHA Project: prototype [NON RECOVERABLE]** Group presentation Continuous assessment Presential Duration: 02:00
14	**6. AHA project. 6.4 Evaluation of the prototype. Expert evaluation of heuristics** Duration: 02:00 Additional activities			
15	**6. AHA Project. 6.5 Analysis of results and reporting.** Duration: 02:00 Additional activities			
16	**6. AHA project. Tutoring** Duration: 02:00 Additional activities			
17				**Final Exam: Assessment: AHA project. Results. [NON RECOVERABLE]** Group presentation Continuous assessment Presential Duration: 03:00

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.

* The schedule is based on an a priori planning of the subject; it might be modified during the academic year, especially considering the COVID19 evolution.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
5	Assignment of political and technological perspective	Individual presentation	No Presential	04:00	30%	5 / 10	CB08
7	Assessment. AHA Project: Planification of the observation of the context of use [NON RECOVERABLE]	Group work	No Presential	02:00	10%	/ 10	CE-DIPO01
10	Assessment. AHA Project: Context of use [NON RECOVERABLE]	Group presentation	Face-to-face	02:00	20%	/ 10	CB08 CE-DIPO01 CE-DIPO04
13	Assessment. AHA Project: prototype [NON RECOVERABLE]	Group presentation	Face-to-face	02:00	20%	/ 10	CE-DIPO01
17	Final Exam: Assessment: AHA project. Results. [NON RECOVERABLE]	Group presentation	Face-to-face	03:00	20%	/ 10	CE-DIPO01 CE-DIPO02 CE-DIPO04 CB08

7.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
5	Assignment of political and technological perspective	Individual presentation	No Presential	04:00	30%	5 / 10	CB08

7.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Final written exam	Written test	Face-to-face	03:00	100%	5 / 10	CB08 CE-DIPO02 CE-DIPO01 CE-DIPO04

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7.2. Assessment criteria

Grading criteria

The projects will be evaluated during their iterative development during the course. Grading of students will be based on:

- Quality of the oral presentations (content, communication, slides)
- Quality of the intermediate and final results
- Ability to debate
- Active participation in class

Progressive evaluation system

The evaluation of this course is based on a progressive evaluation system (continuous evaluation), which grades the active participation of the student during the iterative development of an interactive project carried out in groups, following the human-centred design process. The project accounts for 70% of the final grade.

Besides, there is an individual assignment that accounts for the 30% of the final grade, that can be re-submitted in case a student fails it.

The evaluation activities and their concrete weight in the grading are described in "Continuous evaluation" ("Evaluación continua") above.

Global evaluation process

This course is based on the iterative development of an interactive system. Thus, the evaluation is a progressive one during the semester. Students unable to attend the classes can still submit the assignments in Moodle and will be evaluated at the same time as other students.

Given the iterative and incremental approach of the course, it is not possible to re-submit assignments related to the project at the end of the semester, but there are not minimal grades per assignment.

The political and technological individual assignment can be re-submitted if a student fails, accounting for 30% of the final grade.

Extraordinary evaluation

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The extraordinary evaluation exists for students unable to pass the course during the semester. For that extraordinary evaluation students either must finish a concrete milestone they haven't passed (normally the last iteration; high-fidelity prototype and its evaluation, or the individual assignment), or a final exam that replace 100% of the grade.

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
Operational definition of Active and Healthy Ageing (AHA): A conceptual framework	Bibliography	Paper: Bousquet, Jean, et al. "Operational definition of Active and Healthy Ageing (AHA): A conceptual framework." The journal of nutrition, health & aging 19.9 (2015): 955-960.
Political context	Bibliography	Beard et al. (2016). The World Report on ageing and health: a policy framework for healthy ageing. Lancet 2016; 387: 2145-54
Age Friendly Cities	Bibliography	OMS. Global age-friendly cities: a guide (2017). Disponible en: http://www.who.int/ageing/publications/age_friendly_cities_guide/en/
mHealth	Bibliography	Mapping mHealth research: a decade of evolution. Fiordelli, Maddalena, Nicola Diviani, and Peter J. Schulz. Journal of medical Internet research 15.5 (2013).

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mHealth review	Bibliography	? From Personal to Mobile Healthcare: Challenges and Opportunities Villalba-Mora, Elena, Ignacio Peinado, and Leocadio Rodriguez-Mañas. (2016). Emerging Perspectives on the Mobile Content Evolution. IGI Global, 2016. 124-137.
Inspection Methods	Bibliography	Usability Inspection Methods. Edited by Jakob Nielsen and Robert L. Mack, published by John Wiley & Sons, New York, NY ISBN 0-471-01877-5. 1994

9. Other information

9.1. Other information about the subject

This course contributes to the objectives 4 and 10 of the UN Sustainable Development Goals.

Note 1: please, always ask for an appointment before visiting a professor.

Note 2: please note that cocrete dates for the assignments will be informed at the begining of the course.