ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000715 - E-health: promoting healthy aging

DEGREE PROGRAMME

10AQ - Eit Digital Master's Programme In Human Computer Interaction And Design

ACADEMIC YEAR & SEMESTER

2018/19 - Semester 1

Index

Learning guide

1. Description

1.1. Subject details

Name of the subject	103000715 - E-health: promoting healthy aging
No of credits	4.5 ECTS
Type	Optional
Academic year ot the programme	First year
Semester of tuition	Semester 1
Tuition period	September-January
Tuition languages	English
Degree programme	10AQ - Eit digital master's programme in human computer interaction and design
Centre	10 - Escuela Tecnica Superior de Ingenieros Informaticos
Academic year	2018-19

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Elena Villalba Mora (Subject coordinator)	5110	elena.villalba@upm.es	M - 12:00 - 15:00 F - 12:00 - 15:00 Please, ask for an appointment
Cristian Moral Martos	5110	cristian.moral@upm.es	M - 12:00 - 15:00 F - 12:00 - 15:00 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. Skills and learning outcomes *

3.1. Skills to be learned

CB07 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio

CB09 - Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan¿ a públicos especializados y no especializados de un modo claro y sin ambigüedades

CE14 - Capacidad para conceptualizar, diseñar, desarrollar y evaluar la interacción persona¿ordenador de productos, sistemas, aplicaciones y servicios informáticos

CE16 - Habilidad para hacer conexiones entre los deseos y necesidades del consumidor o cliente y lo que la tecnología puede ofrecer

3.2. Learning outcomes

RA3 - Evaluate the usability and accessibility of prototypes

RA1 - Apply techniques for modelling the context of use

RA17 - Understand techniques, technologies and processes that allow to prototype, develop and improve digital interactive systems based on various user interface technology platforms

RA29 - Understand needs of specific contexts

* 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

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.

4.2. Syllabus

1. Active and Health Ageing
    1.1. Course introduction
    1.2. Definition and frameworks
2. Clinical perspective
3. Political perspective
4. Social and personal perspective
5. Intrinsic capacity and frailty
6. Cognitive Decline and Mild Cognitive Impairment
7. Mobile Health
8. Active and Healthy Ageing Project

5. Schedule

5.1. Subject schedule*

Week	Face-to-face classroom activities	Face-to-face laboratory activities	Other face-to-face activities	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. 2.1 Fundamentals of ageing** Duration: 02:00 Lecture			
3	**2.2 Visit to Ageing Centre** Duration: 02:00 Additional activities			
4	**3. Political perspective. 3.1 WHO policies** Duration: 02:00 Lecture			
5	**3. Political perspective. 3.2 European Innovation Partnership on Active and Healthy Ageing** Duration: 02:00 Lecture			
6	**4. Social and personal perspective** Duration: 02:00 Lecture **Visit to Assistive Products Centre** Duration: 02:00 Additional activities			
7	**5.1. Intrinsic capacity and Frailty. 5.2. Technological solutions to prevent, predict and manage functional decline** Duration: 02:00 Lecture			
8	**6.1. Cognitive decline and Mild Cognitive Impairment. 6.2. Technological solutions to prevent, predict and manage cognitive decline** Duration: 02:00 Lecture			
9	**7.1. Analysis of mHealth for older population** Duration: 02:00 Lecture **Visit to Learning Centre** Duration: 02:00 Additional activities			

10				**Assessment 7.2 Expert evaluation of a mHealth App** Individual presentation Continuous assessment Duration: 02:00
11	**8. AHA Project. 8.1. Topic choice .8.2 Analysis of context of use** Duration: 02:00 Additional activities			**Assessment. AHA Project: Context of use** Individual presentation Continuous assessment Duration: 02:00
12	**8.3 Design and implementation of a prototype** Duration: 02:00 Additional activities **Visit to Accessibility centre** Duration: 02:00 Additional activities			**Assessment. AHA Project: prototype** Individual presentation Continuous assessment Duration: 02:00
13	**8.4 Expert evaluation: co-evaluation of heuristics** Duration: 01:30 Additional activities			**Assessment: 8.4 Expert evaluation: co-evaluation of heuristics** Individual work Continuous assessment Duration: 00:30
14	**8.4 Expert evaluation: co-evaluation of accessibility** Duration: 01:30 Additional activities			**Assessment: 8.4 Expert evaluation: co-evaluation of accessibility** Individual work Continuous assessment Duration: 00:30
15	**8.5 Reporting and proposal for improvement. Course Closure** Duration: 02:00 Additional activities			
16				**Final written Exam** Written test Final examination Duration: 03:00 **Visits assessment** Individual work Continuous assessment Duration: 04:00

The independent study hours are training activities during which students should spend time on individual study or individual assignments.

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 subject schedule is based on a previous theorical planning of the subject plan and might go to through experience some unexpected changes along throughout the academic year.

6. Activities and assessment criteria

6.1. Assessment activities

6.1.1. Continuous assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
10	Assessment 7.2 Expert evaluation of a mHealth App	Individual presentation	Face-to-face	02:00	20%	/ 10	CB09 CE14
11	Assessment. AHA Project: Context of use	Individual presentation	No Presential	02:00	20%	/ 10	CB09 CE16 CB07
12	Assessment. AHA Project: prototype	Individual presentation	No Presential	02:00	20%	/ 10	CE14
13	Assessment: 8.4 Expert evaluation: co-evaluation of heuristics	Individual work	Face-to-face	00:30	15%	/ 10	CB09 CE14 CB07
14	Assessment: 8.4 Expert evaluation: co-evaluation of accessibility	Individual work	Face-to-face	00:30	15%	/ 10	CB09 CE14 CB07
16	Visits assessment	Individual work	No Presential	04:00	10%	/ 10	CB09 CE16

6.1.2. Final examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
16	Final written Exam	Written test	Face-to-face	03:00	100%	5 / 10	CB09 CE14 CE16 CB07

6.1.3. 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	CB09 CE14 CE16 CB07

6.2. Assessment criteria

Ability to understand needs of users, in particular older users

Ability to conceptualize, design and evaluate interactive systems for the older population

Ability to communicate results and debate with peers

7. Teaching resources

7.1. 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).
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
Accessibility	Bibliography	EN 301 549 Accessibility requirements suitable for public procurement of ICT products and services in Europe. CEN, CENELEC, ETSI. 2014. Disponible en: http://www.etsi.org/deliver/etsi_en/301500_301599/301549/01.01.01_60/en_301549v010101p.pdf

8. Other information

8.1. Other information about the subject

Note: Attendance to the visits is mandatory