INTERNATIONAL
CAMPUS OF
EXCELLENCE

POLITÉCNICA

E.T.S. de Ingenieros
Informaticos

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000837 - E Health: Promoting Active And Healthy Ageing

DEGREE PROGRAMME

10AX - Master Universitario Innovación Digital Ciencia de Datos Itinerario Health

ACADEMIC YEAR & SEMESTER

2020/21 - Semester 1

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Learning guide

1. Description

1.1. Subject details

Name of the subject	103000837 - 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	10AX - Master Universitario Innovación Digital Ciencia de Datos Itinerario Health
Centre	10 - Escuela Tecnica Superior de Ingenieros Informaticos
Academic year	2020-21

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	M - 10:00 - 12:00 M - 14:00 - 15:00 W - 12:00 - 15:00 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 - 12:00 - 14:00 Please, ask for an appointment

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* 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

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

CE-HMDA07 - Capacidad para diseñar y gestionar proyectos de salud y datos médicos

CG07 - Capacidad de trabajar y comunicarse también en contextos internacionales.

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4.2. Learning outcomes

RA50 - Apply techniques for modelling the context of use

RA51 - Evaluate the usability of prototypes

RA48 - Understand how user-centred design methods are used in non-academic environments

RA49 - Apply techniques for designing and implementing prototypes of different fidelity levels

* 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.

5.2. 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. Active and Healthy Ageing Project

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6. Schedule

6.1. Subject schedule*

Week	Face-to-face classroom activities	Face-to-face 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		**1. Active and Healthy Ageing: 1.1 Course introduction 1.2. Definitions and frameworks** Duration: 02:00	
2	**2. Clinical perspective. 2.1 Fundamentals of ageing** Duration: 02:00		**2. Clinical perspective. 2.1 Fundamentals of ageing** Duration: 02:00	
3	**3. Political perspective.** Duration: 00:30		**3. Political perspective.** Duration: 00:30	**Assignment of political perspective** Continuous assessment Presential Duration: 01:30
4	**4. Social and personal perspective** Duration: 02:00		**4. Social and personal perspective** Duration: 02:00	
5	**7. Introduction to AHA project** Duration: 02:00		**7. Introduction to AHA project** Duration: 02:00	
6	**5.1. Intrinsic capacity and Frailty. 5.2. Technological solutions to prevent, predict and manage functional decline** Duration: 02:00		**5.1. Intrinsic capacity and Frailty. 5.2. Technological solutions to prevent, predict and manage functional decline** Duration: 02:00	
7	**6.1. Cognitive decline and Mild Cognitive Impairment. 6.2. Technological solutions to prevent, predict and manage cognitive decline** Duration: 02:00		**6.1. Cognitive decline and Mild Cognitive Impairment. 6.2. Technological solutions to prevent, predict and manage cognitive decline** Duration: 02:00	
8	**7. AHA Project. 7.1. Topic choice and planning of context of use observation** Duration: 02:00		**7. AHA Project. 7.1. Topic choice and planning of context of use observation** Duration: 02:00	**Assessment. AHA Project: Planification of the observation of the context of use** Continuous assessment Not Presential Duration: 02:00
9	**7.2 Observation, analysis and specification of context of use** Duration: 02:00		**7.2 Observation, analysis and specification of context of use** Duration: 02:00	

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10				**Assessment. AHA Project: Context of use** Continuous assessment Presential Duration: 02:00
11	**7.3 Design and implementation of a prototype** Duration: 02:00		**7.3 Design and implementation of a prototype** Duration: 02:00	
12				**Assessment. AHA Project: prototype** Continuous assessment Presential Duration: 02:00
13	**7.4 Evaluation of the prototype. Expert evaluation of heuristics** Duration: 02:00		**7.4 Evaluation of the prototype. Expert evaluation of heuristics** Duration: 02:00	
14	**7.5 Analysis of results and reporting.** Duration: 02:00		**7.5 Analysis of results and reporting.** Duration: 02:00	
15	**7.5 Analysis of results and reporting.** Duration: 02:00		**7.5 Analysis of results and reporting.** Duration: 02:00	
16				**Assessment: AHA project. Results.** Continuous assessment Presential Duration: 02:00
17				**Final written Exam** Final examination 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.

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7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Continuous assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
3	Assignment of political perspective		Face-to-face	01:30	10%	/ 10	CG07
8	Assessment. AHA Project: Planification of the observation of the context of use		No Presential	02:00	10%	/ 10	CG07 CB07 CE-HMDA07
10	Assessment. AHA Project: Context of use		Face-to-face	02:00	20%	/ 10	CB07 CE-HMDA07 CG07
12	Assessment. AHA Project: prototype		Face-to-face	02:00	30%	/ 10	CB07 CE-HMDA07 CG07
16	Assessment: AHA project. Results.		Face-to-face	02:00	30%	/ 10	CB07 CE-HMDA07 CG07

7.1.2. Final examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Final written Exam		Face-to-face	03:00	100%	5 / 10	CB07 CE-HMDA07 CG07

7.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Final written exam		Face-to-face	03:00	100%	5 / 10	CB07 CE-HMDA07 CG07

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7.2. Assessment criteria

In the evaluation activities, the following criteria is taken into account: 1) Ability to understand needs of users, in particular older users ; 2) Ability to conceptualize, design and evaluate interactive systems for the older population; and 3) Ability to communicate results and debate with peers.

In this first semester of the academic year 2020-21, and due to the COVID-19 situation, academic activities are scheduled to be online, unless the pandemic conditions improve substantially. That means that "face to face" evaluation activities will be performed online through videoconferences.

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

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

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