Universidad Zaragoza

Year : 2019/20

69315 - e-Health systems

Syllabus Information

Academic Year: 2019/20
Subject: 69315 - e-Health systems
Faculty / School: 110 -

Degree: 547 - Master's in Biomedical Engineering

ECTS: 3.0
Year: 1
Semester: Second semester
Subject Type: Optional
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It promotes creativity and autonomous learning. A wide range of teaching and learning tasks are implemented, such as lectures, practical tasks, and specific research activities.

Students are expected to participate actively in the class throughout the semester.

4.2.Learning tasks

The course includes the following learning tasks:

- A01 Lectures (22 hours). The professor will explain the main contents of the course. They are complemented with seminars from specialists involved in experiences of e-Health services.
- A02 Case studies (6 hours). The course includes the approach, design and evaluation of e-Health project proposals.
- A05 Assignments. Students work on a proposal for the service and / or application of telemedicine and e-health in different settings and scenarios, using the concepts and tools learned in the course. It also includes the oral

presentation and discussion of that proposal.

- A06 Tutorials. Students may ask any questions they might have about unclear contents of the course.
- A08 Assessment. A set of written tests and assignments. The relevant information is described in section 4 (Assessment tasks).

4.3.Syllabus

The course will address the following topics:

Topic 1. Introduction

- Basic concepts.
- Requirements for systems and services, regulations, etc.
- Examples of systems.

Topic 2. Interoperability and standardization

- Fundamentals of eHealth interoperability
- Standards for electrocardiology (SCP-ECG)
- Standards for medical devices(IEEE11073)
- Standards for medical image (DICOM)
- Standards for clinical terminolgy (SNOMED-CT)
- Standards for EHR (13606, openEHR)
- Standards for medical information exchange (HL7)

Topic 3. e-Health services assessment

- Methodological basis for assessment, alignment theories.
- Models for assessment
- Successes and failures of eHealth systems and services: Telederma, Tele-EEG

Topic 4. m-Health

- Mobile apps, mHealth challenges and market
- apps design and assessment
- Social networks in mHealth

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the EINA website.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=69315&year=2019