Course guide

240319 - 240NR026 - M-Health Systems

Unit in charge: Barcelona School of Industrial Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.

Degree: MASTER'S DEGREE IN NEUROENGINEERING AND REHABILITATION (Syllabus 2020). (Compulsory subject).

Academic year: 2022  ECTS Credits: 3.0  Languages: Catalan

LECTURER

Coordinating lecturer: Ramos Castro, Juan Jose

Others: Ramos Castro, Juan Jose

TEACHING METHODOLOGY

Participatory class
Project-based learning

LEARNING OBJECTIVES OF THE SUBJECT

To introduce the student in the de telemedicine systems for ambulatory or mobile applications. The goal is that the student learns the general structure of m-Health systems, their applications and limitations (technical and legal). In order to carry out this learning the student will have to analyze a practical case, identify the needs and propose a solution based on a telemedicine system.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>27.0</td>
<td>36.00</td>
</tr>
<tr>
<td>Self study</td>
<td>48.0</td>
<td>64.00</td>
</tr>
</tbody>
</table>

Total learning time: 75 h

CONTENTS

Introduction to m-Health systems

Description:
content english

Full-or-part-time: 4h
Theory classes: 2h
Self study: 2h
m-Health sensors

Description:
Health and well-being sensors
Diagnostic sensors
Assistive sensors
Prognostic sensors

Full-or-part-time: 4h
Theory classes: 2h
Self study: 2h

m-Health and mobile communication systems

Description:
-Wireless data transmission
EM wave propagation
Modulation
Mobile Networks and Wireless Technologies for m-Health
IoT and M2M Communications for Healthcare

Full-or-part-time: 5h
Theory classes: 3h
Self study: 2h

Regulatory aspects of m-health systems

Description:
Telemedicine in EU
Legal aspects
Data protection

Full-or-part-time: 4h
Theory classes: 2h
Self study: 2h

The future of m-Health care systems

Description:
content english

Full-or-part-time: 4h
Theory classes: 2h
Self study: 2h
GRADING SYSTEM

25% Continuous grading (project results)
50% Project grading (35% team work, 15% peer evaluation)
25% Final exam

BIBLIOGRAPHY

Basic:

Complementary: