

Master's Dissertation

Code: 44029
ECTS Credits: 12

Degree	Type	Year	Semester
4316624 Internet of Things for e-Health	OB	0	2

Contact

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Use of languages

Principal working language: english (eng)

Prerequisites

Attended M1-M5, compulsory modules

Objectives and Contextualisation

The objective of this module is the development of a project in which students must apply the knowledge acquired in the master modules to solve a practical problem related to IoT for eHealth. To do this, students must be able to analyze the problem, propose an initial hypothesis to solve it, design the appropriate methodology to validate this hypothesis and draw the conclusions arising from their work. As a result, students must write a final report of the work carried out and defend it in a public way before a court.

We will offer a large set of MsC Thesis offer from both Industries, Public/Private Health System and University.

The follow-up of the MsC Thesis will use the application at <https://tfe.uab.cat>

Skills

- Apply the ethical rules applicable in the health sector.
- Communicate and justify conclusions clearly and unambiguously to both specialist and non-specialist audiences.
- Continue the learning process, to a large extent autonomously.
- Design, develop, manage and evaluation mechanisms of certification, compression and security guarantees in the processing of and access to information in a local or distributed processing system.
- Identify and understand properties of user usability and accessibility to applied technologies in the area of health and health provision.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
- Plan, develop, evaluate and manage solution for projects in the different areas of IoT taking into account aspects of multidisciplinary co-design, user privacy and data security.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Solves problems of health and health services which require elements of the value chain of the IoT using specific concepts and technologies.
- Understand, analyse and evaluate theories, results and developments in the language of reference (English) as well as the mother tongue (Catalan, Spanish) in the area of IoT in health.

Learning outcomes

1. Apply methodologies to the TFM for project planning, development, evaluation and management in the field of IoT taking into account multidisciplinary co-design, user privacy and data security.
2. Communicate and justify conclusions clearly and unambiguously to both specialist and non-specialist audiences.
3. Continue the learning process, to a large extent autonomously.
4. In the TFM, apply criteria for the identification, evaluation and selection of technologies, components and IoT platforms in order to obtain efficient solutions.
5. In the TFM, apply ethical and legal regulations applicable to the health sector through the specific processes in this sector.
6. In the TFM, apply suitable mechanisms for the certification, compression and guarantee of security in information processing and access.
7. In the TFM, apply usability and accessibility techniques in developing IoT applications and solutions.
8. Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
9. Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
10. Understand, analyse and evaluate theories, results and developments in the language of reference (English) as well as the mother tongue (Catalan, Spanish) in the area of IoT in health.

Content

See methodology section.

Methodology

Each student will be assigned a thesis supervisor (two when there is an involvement of an external entity). The work will be developed according to the guidelines established by the supervisor agreed with the student. The teaching methodology will combine meetings between the student and the supervisor, the autonomous work carried out by the student and presentation of results.

The methodology and document delivery will also use the

Activities

Title	Hours	ECTS	Learning outcomes
Type: Supervised			
MsC Thesis work supervised by thesis advisor(s)	49	1.96	1, 2, 3, 4, 5, 6, 7
Type: Autonomous			
Autonomous work on the Students MsC Thesis	250	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Evaluation

Progress reports will be delivered to the above mentioned web site.

Oral presentation will take place in front of an evaluation jury.

MsC Thesis will be delivered to the Master's coordinator and members of the jury at least one week in advance to the oral presentation.

Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
MsC Thesis document	40%	0	0	1, 2, 4, 5, 6, 7, 8, 9, 10
Oral Presentation	20%	1	0.04	2, 10
Progress Reports	40%	0	0	1, 2, 3, 4, 5, 6, 7

Bibliography

Specific form every Master Thesis