



Year : 2018/19

## **62949 - Internet of Things**

### **Syllabus Information**

<b>Academic Year:</b>	2018/19
<b>Subject:</b>	62949 - Internet of Things
<b>Faculty / School:</b>	110 -
<b>Degree:</b>	562 - Master's in Product Development Engineering
<b>ECTS:</b>	4.5
<b>Year:</b>	1
<b>Semester:</b>	Second semester
<b>Subject Type:</b>	Optional
<b>Module:</b>	---

### **General information**

#### **Aims of the course**

#### **Context and importance of this course in the degree**

#### **Recommendations to take this course**

#### **Learning goals**

#### **Competences**

#### **Learning goals**

#### **Importance of learning goals**

#### **Assessment (1st and 2nd call)**

#### **Assessment tasks (description of tasks, marking system and assessment criteria)**

#### **Methodology, learning tasks, syllabus and resources**

#### **Methodological overview**

The methodology followed in this course is oriented towards achievement of the learning objectives. It is based on a practical approach and learning by experience. A wide range of teaching and learning tasks are implemented, such as lectures practice sessions, problem-solving, laboratory sessions, autonomous work, and assignments.

## Learning tasks

The course (60 hours of teaching sessions) includes the following learning tasks:

- Lectures. Their goal is to provide the necessary bases to understand the relevance of some theoretical aspects that cannot be learned in other activities.
- Problem-solving sessions. Some exercises will be solved to apply the concepts and techniques introduced in lectures.
- Laboratory sessions.
- Practical assignments. The aim of practical activities is to apply the different techniques in product development design.
- Autonomous work and study.

## Syllabus

The course will address the following topics:

### Theory

1. Internet and the evolution of the web
2. Types of network computing
3. Internet of things
4. Design of intelligent devices
5. Electronic communications between devices
6. Interconnectivity and interoperability

### Practice

1. Sensing the world
2. Embedded intelligence
3. Interacting with the user
4. Communicating machines and Internet

## 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 and the course website.

## Bibliography and recommended resources

- Casey Reas and Ben Fry (2010). Getting Started with Processing. Maker Media, 2010
- Sergio Melnick y José Miguel Barraza (2015). Internet de las Cosas (IoT) Web 3.0 y la revolución móvil: El acceso a la nueva mente tecnológica colectiva. ICREAN S.A
- Samuel Greengard (2015). The Internet of Things. MIT Press, 2015