

[MNF001] IOT TECHNOLOGIES I

GENERAL INFORMATION

Studies	MASTER DEGREE IN DATA ANALYSIS, CYBERSECURITY AND CLOUD COMPUTING		Subject	IoT Technologies	
Semester	1	Course	1	Mention / Field of specialisation	
Character	OPTIONAL		Modality	Adapted Face-to-face	
Plan	2019		Language	ENGLISH	
Credits	3	Hours/week	0	Total hours	32 class hours + 43 non-class hours = 75 total hours

PROFESSORS

MUXIKA OLASAGASTI, EÑAUT

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

SKILLS

VERIFICA SKILLS

SPECIFIC

MNCE15 - Obtaining physical signals from sensors and designing the adequate conditioning for their transfer to control systems in both industrial and non-industrial contexts.

BASIC

M_CB7 - To know how to apply the acquired knowledge and competencies and the ability to solve problems in new or unfamiliar contexts within wider (or multidisciplinary) environments related to their field of study

CONTENTS

- * Introduction
- * General characteristics of sensors
 - Theoretical foundations
 - Types of transducers
 - Signal conditioning and calibration
 - Sensor analysis and selection
- * Sensor communications
 - Introduction to IoT: from devices to the Cloud
 - Communication concepts review
 - Review of sensor communication protocols
 - Wireless networks
- * Practical case study of a smart sensor
 - Simulation
 - Real case study

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Slides of the subject	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_Ink.pl?grupo=MASTERROBOTIKA11&ejecuta=25&_ST
Moodle Platform	
Technical articles	
Specific Master Software	