[MNF102] IoT Technologies 2

GENERAL INFORMATION

Studies	MASTER DEGREE IN DATA ANALYSIS, CYBERSECURITY AND CLOUD COMPUTING	**Subject**	IoT Technologies
Semester	2	**Course**	1
Character	OPTIONAL	**Mention / Field of specialisation**	
Plan	2024	**Modality**	Face-to-face	**Language**	ENGLISH
Credits	3	**Hours/week**	0	**Total hours**	43 class hours + 32 non-class hours = **75 total hours**

PROFESSORS

ALONSO GOMEZ, ARRATE

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
M2N116 - Developing and launching an IoT infrastructure, from the sensor through the control system and up to the cloud, using state-of-the-art communication technologies		x		2,6
M2N210 - Possess the learning skills that will enable them to continue studying in a largely self-directed or autonomous way.		x		0,4
			Total:	**3**

KC: Knowledge or Content / SK: Skills / AB: Abilities

SECONDARY LEARNING RESULTS

RA191 **Designs a suitable approach for the resolution of a use case for remote data acquisition systems ensuring its ability to adapt to situations where new knowledge to be learned is required**

LEARNING ACTIVITIES	CH	NCH	TH
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	8 h.		8 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	20 h.		20 h.
Carrying out exercises and solving problems individually and/or in teams		12 h.	12 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Individual written and/or oral tests or individual coding/programming tests	100%	Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 28 h.
NCH - Non-class hours: 12 h.
TH - Total hours: 40 h.

RA192 **Performs an implementation of a remote data acquisition systems infrastructure by cooperating and working individually and in multidisciplinary teams**

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	15 h.	20 h.	35 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	50%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	50%	

Goi Eskola Politeknikoa | Mondragon Unibertsitatea
Course: 2024 / 2025 - Course planning

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Unibertsitatea
Goi Eskola
Politeknikoa
Escuela Politécnica
Superior

CH - Class hours: 15 h.
NCH - Non-class hours: 20 h.
TH - Total hours: 35 h.

CONTENTS

- Introduction to the Internet of Things (IoT)
- Embedded systems and IoT devices
  - Embedded platforms and communications for the IoT
  - Sensor networks
  - Modeling of cyberphysical systems
- IoT Services Architecture
  - Distributed systems for IoT
  - Architectures and service platforms
- Information and knowledge management in IoT: Cloud computing systems

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Technical articles	https://labur.eus/gNtph
Subject notes	