[MSD001] Fundamentals of Labview

GENERAL INFORMATION

Studies	MASTER DEGREE IN SMART ENERGY SYSTEMS			**Subject**	Hardware and rapid prototyping
Semester	1	**Course**	1	**Mention / Field of specialisation**	
Character	OPTIONAL				
Plan	2022	**Modality**	Face-to-face	**Language**	CASTELLANO
Credits	3	**Hours/week**	0	**Total hours**	44 class hours + 31 non-class hours = **75 total hours**

PROFESSORS

DOK-URKIZU AROCENA, JUNE

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MSR091 - Implement measurement systems through rapid prototyping equipment		x		2,8
MSR171 - Ability to work in multidisciplinary teams and in a multilingual environment	x		x	0,04
MSR251 - Develops a project in the field of energy systems in a practical application context		x		0,16
			Total:	3

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

SECONDARY LEARNING RESULTS

RMS116 **[!]** ***Implementar sistemas de medida a través de de equipos de prototipado rápido***

LEARNING ACTIVITIES	CH	NCH	TH
Computer simulation exercises, individually and/or in teams	36 h.	26 h.	62 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	8 h.		8 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	100%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

CH - Class hours: 44 h.
NCH - Non-class hours: 26 h.
TH - Total hours: 70 h.

RMS171 **[!]** ***Es capaz de trabajar en equipos multidisciplinares y en un entorno multilingüe***

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		1 h.	1 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	100%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

CH - Class hours: 0 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 1 h.

RMS251 **[!]** ***Desarrolla un proyecto del ámbito de los sistemas energéticos en un contexto de aplicación práctica***

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		4 h.	4 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%

MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 0 h.
NCH - Non-class hours: 4 h.
TH - Total hours: 4 h.

CONTENTS

- Introduction to programming in Labview

1. Loops.
2. Shift register and counters
3. Arrays
4. Clusters
5. Graphs
6. Property nodes
7. Reading and writing of files
8. State machines

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	Acceso online a bibliografía: https://labur.eus/QW4BO
Moodle Platform	
Video projections	
Computer practical training	