

[MRA008] HYDRAULIC DRIVES

GENERAL INFORMATION

Studies	Master's Degree in ROBOTICS AND CONTROL SYSTEMS		Subject	Automation	
Semester	2	Course	1	Mention / Field of specialisation	AUTOMATION
Character	OPTIONAL		Modality	Adapted Face-to-face	
Plan	2019	Hours/week	0	Language	CASTELLANO
Credits	3	Total hours	35 class hours + 40 non-class hours = 75 total hours		

PROFESSORS

ORUNA OTALORA, ANGEL

REQUIRED PREVIOUS KNOWLEDGE

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

SKILLS

VERIFICA SKILLS

SPECIFIC

MRCE02 - Applied knowledge of automation in industrial machinery with fluid power systems

CROSS

MRCTR1 - Ability to work in multidisciplinary teams and in a multilingual environment and to communicate, both orally and in writing, knowledge, procedures, results and ideas related to subjects related to the Master's degree

BASIC

M_CB9 - To share knowledge, conclusions and their rationale with specialised and lay audiences in a clear, unambiguous manner

LEARNING RESULTS

RA021 The ability to identify the requirements for fluidic systems in industrial machinery and to relate them to the technical characteristics of hydraulic components, working individually and in multidisciplinary teams.

LEARNING ACTIVITIES

	CH	NCH	TH
Development, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams	4 h.	6 h.	10 h.
Individual or team workshop and/or lab practice	4 h.	6 h.	10 h.
Classroom presentations of relevant concepts and procedures in participatory environments	5 h.		5 h.
Individual and team solving of exercises, problems, and practices	4 h.	6 h.	10 h.

EVALUATION SYSTEM

	W
Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices	75%
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	25%

MAKE-UP MECHANISMS

Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: All activities (control points, individual and group work, etc.) must have a minimum grade of 5 and an opportunity for recovery (except the PBL). In unapproved training activities (less than 5) the recovery is compulsory and the final grade will be the grade obtained in the recovery. In the activities carried out it is necessary to obtain a minimum mark of 4 to calculate the average mark of the learning result. Otherwise, the note of the learning result will be that of the suspended activity. The system will calculate the final grade with the RA, applying the percentages defined in IKOF.

CH - Class hours: 17 h.

NCH - Non-class hours: 18 h.

TH - Total hours: 35 h.

RA022 The ability to select and integrate the necessary fluidic components within the global automatic system of the machine,

communicating the conclusions in a reasoned way

LEARNING ACTIVITIES

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Development, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams	4 h.	6 h.	10 h.
Practices of problem solving and real or simulated context projects	5 h.	8 h.	13 h.
Classroom presentations of relevant concepts and procedures in participatory environments	4 h.		4 h.
Individual and team solving of exercises, problems, and practices	5 h.	8 h.	13 h.

EVALUATION SYSTEM

W

Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices	75%
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	25%

MAKE-UP MECHANISMS

Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices
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CH - Class hours: 18 h.
NCH - Non-class hours: 22 h.
TH - Total hours: 40 h.

CONTENTS

- * Components of hydraulic systems
- * Hydraulic diagrams
- * Proportional and servo hydraulics

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Subject notes
 Topic related web quires
 Labs
 Moodle Platform
 Specific Master Software
 Slides of the subject

Bibliography

(No bibliography)