

[GJK103] MAINTENANCE AND REPAIR OF ELECTRONIC EQUIPMENT

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING	Subject	?
Semester	2	Course	2
Character	OPTIONAL	Mention / Field of specialisation	
Plan	2020	Modality	Face-to-face
Credits	4,5	Hours/week	3.75
		Language	CASTELLANO/EUSKARA
		Total hours	67.5 class hours + 45 non-class hours = 112.5 total hours

PROFESSORS

SUEIRO ANDINO, URKO

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
ELECTRICAL MACHINES	(No previous knowledge required)
ELECTRICAL POWER SYSTEMS	

SKILLS

VERIFICA SKILLS

SPECIFIC

GJCE36 - Ability to plan and develop the maintenance of different electronic equipment, detecting, diagnosing and repairing possible breakdowns in said equipment.

GENERAL

GJCG03 - Addressing and optimising activities of assembly, commissioning, assistance and maintenance of facilities, machinery, and industrial mechatronic systems

CROSS

GJCTR2 - To be able to understand and apply knowledge to problem solving in complex work situations or specialised and professional environments calling for creative and innovative ideas, using self-developed arguments and procedures;

LEARNING RESULTS

RG201 They coordinate their work with the other members of the team, contribute in their team to the development of the tasks to be carried out and the creation of a good working climate.

LEARNING ACTIVITIES

	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.	1 h.	3 h.

EVALUATION SYSTEM

	W
Self-assessment	30%
Co-assessment	35%
Observation (technical capacity, attitude and participation)	35%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: Continuous assessment. Retake is not foreseen.

CH - Class hours: 2 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 3 h.

RG202 They make decisions and assess the possible consequences of the selected alternative.

LEARNING ACTIVITIES

	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.	1 h.	3 h.

EVALUATION SYSTEM

	W
Observation (technical capacity, attitude and participation)	100%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: Continuous assessment. Retake is not foreseen.

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RG204 They define the problem, the development of the solution, as well as the conclusions in an effective way, making a correct use of the language, in writing.

LEARNING ACTIVITIES

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

CH

2 h.

NCH

1 h.

TH

3 h.

EVALUATION SYSTEM

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

W

100%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: Revision and correction of the written report of the semester project

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RG205 They define the problem, the development of the solution, as well as the conclusions in an effective way, making a correct use of the language, orally.

LEARNING ACTIVITIES

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

CH

2 h.

NCH

1 h.

TH

3 h.

EVALUATION SYSTEM

Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems

W

100%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: Continuous assessment. Retake is not foreseen.

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RGJ247 They plan and elaborate the maintenance of electronic equipment.

LEARNING ACTIVITIES

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning

CH

2 h.

NCH

4 h.

TH

6 h.

Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams

6 h.

4 h.

10 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects

12 h.

6 h.

18 h.

Practical work in workshops and/or laboratories, individually and/or in teams

10 h.

6 h.

16 h.

EVALUATION SYSTEM

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

W

60%

MAKE-UP MECHANISMS

Individual written and oral tests to assess technical skills of the subject

Comments: Final mark: written retake exam (75%) + exam (25%).

Individual written and/or oral tests or individual coding/programming tests

40%

Laboratory practices will be made-up by on-going evaluation.

CH - Class hours: 30 h.

NCH - Non-class hours: 20 h.

TH - Total hours: 50 h.

RGJ248 They detect, diagnose and repair malfunctions in electronic equipment.

LEARNING ACTIVITIES

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning	2 h.	4 h.	6 h.
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	6 h.	4 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	8 h.	3 h.	11 h.
Practical work in workshops and/or laboratories, individually and/or in teams	13,5 h.	10 h.	23,5 h.

EVALUATION SYSTEM

	<i>W</i>
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	60%
Individual written and/or oral tests or individual coding/programming tests	40%

MAKE-UP MECHANISMS

Individual written and oral tests to assess technical skills of the subject
Comments: Final mark: written retake exam (75%) + exam (25%).
 Laboratory practices will be made-up by on-going evaluation.

CH - Class hours: 29,5 h.

NCH - Non-class hours: 21 h.

TH - Total hours: 50,5 h.

CONTENTS

1. MAINTENANCE OF ELECTRONIC EQUIPMENT
2. DIAGNOSIS OF FAILURES IN ELECTRONIC EQUIPMENT
3. REPAIR OF FAILURES OF ELEMENTS AND SYSTEMS USED IN ELECTRONIC EQUIPMENT

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Lab practical training
 Labs
 Moodle Platform
 Slides of the subject
 Topic related web quires

Bibliography

http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_in_k.pl?grupo=MECATRONICA22&ejecuta=40&_ST