

[GJN101] INTRODUCTION TO INDUSTRIAL MANAGEMENT SYSTEMS: MAINTENANCE

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING		Subject	?
Semester	1	Course	2	Mention / Field of specialisation
Character	OPTIONAL		Language	CASTELLANO/EUSKARA
Plan	2020	Modality	Face-to-face	Total hours
Credits	3	Hours/week	2.5	45 class hours + 30 non-class hours = 75 total hours

PROFESSORS

URIZAR AIZPURU, ENERITZ

REQUIRED PREVIOUS KNOWLEDGE

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

SKILLS

VERIFICA SKILLS

SPECIFIC

GJCE29 - Knowledge of maintenance management methods and systems

GENERAL

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

GJCG04 - Managing technically teams and people in activities of assembly, commissioning, assistance and maintenance of facilities, machinery and industrial systems, through the methodology of administration by projects for the effective execution of planning

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;

BASIC

G_CB5 - To have developed learning abilities required to embark on subsequent studies with a high level of autonomy.

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	1 h.	1 h.	2 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: With the project of the second semester

CH - Class hours: 1 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 2 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	1 h.	1 h.	2 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: With the project of the second semester

CH - Class hours: 1 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 2 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: With the oral presentation of the project of the second semester

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

RGJ234 They establish phases of a maintenance process for industrial machinery and equipment installations

LEARNING ACTIVITIES

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

CH

2 h.

NCH

3 h.

TH

5 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

3 h.

2 h.

5 h.

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

10 h.

5 h.

15 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 20%
 Individual written and/or oral tests or individual coding/programming tests 80%

Individual written and oral tests to assess technical skills of the subject
Comments: Final mark: written retake exam (75%) + exam (25%).

CH - Class hours: 15 h.
NCH - Non-class hours: 10 h.
TH - Total hours: 25 h.

RGJ235 They make maintenance plans for industrial facilities, establishing monitoring and control procedures.

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	8 h.	4 h.	12 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	3 h.	2 h.	5 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	4 h.	4 h.	8 h.

EVALUATION SYSTEM

W

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems 20%
 Individual written and/or oral tests or individual coding/programming tests 80%

MAKE-UP MECHANISMS

Individual written and oral tests to assess technical skills of the subject
Comments: Final mark: written retake exam (75%) + exam (25%)

CH - Class hours: 15 h.
NCH - Non-class hours: 10 h.
TH - Total hours: 25 h.

RGJ236 They prepare spare parts catalogues and supply programs

LEARNING ACTIVITIES

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
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	2 h.	3 h.	5 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	2 h.	1 h.	3 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	5 h.	2 h.	7 h.

EVALUATION SYSTEM

W

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems 20%
 Individual written and/or oral tests or individual coding/programming tests 80%

MAKE-UP MECHANISMS

Individual written and oral tests to assess technical skills of the subject
Comments: Final mark: written retake exam (75%) + exam (25%)

CH - Class hours: 9 h.
NCH - Non-class hours: 6 h.
TH - Total hours: 15 h.

CONTENTS

1. ESTABLISHMENT OF MAINTENANCE PROCESSES

Methods of planning and maintenance programming
Maintenance processes

2. ELABORATION OF THE COMPLETE RANGE OF MAINTENANCE PROCEDURES
Regulation and safety
Computer-based management systems

3. MANAGEMENT AND SUPPLY
Maintenance warehouse organization systems
Spare parts codification

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Slides of the subject
Class presentations
Technical articles
Moodle Platform

Bibliography

http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_in_k.pl?grupo=MECATRONICA21&ejecuta=40&_ST