

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	430 - Bachelor's Degree in Electrical Engineering
ECTS	6.0
Year	4
Semester	Half-yearly
Subject Type	Optional
Module	---

1.General information**1.1.Introduction****1.2.Recommendations to take this course****1.3.Context and importance of this course in the degree****1.4.Activities and key dates****2.Learning goals****2.1.Learning goals****2.2.Importance of learning goals****3.Aims of the course and competences****3.1.Aims of the course****3.2.Competences****4.Assessment (1st and 2nd call)****4.1.Assessment tasks (description of tasks, marking system and assessment criteria)****5.Methodology, learning tasks, syllabus and resources****5.1.Methodological overview**

The results programmed for this course include achieving theoretical, cases and laboratory in the field of the maintenance. In the theory classes will present the theoretical and practical foundations, learn with numerous examples. In the case-based classes will develop specific cases.

Laboratory practices will be carried out in small groups, where the student will learn to handle equipment specially oriented to predictive maintenance

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5.2.Learning tasks

Lecture (45 classroom hours)

The course is case-based, sessions of exposure and explanation of contents. Cases, technical notes, and readings will be assigned for each session. The teacher will be introduced to the concepts and fundamentals illustrated with real examples. Encourage the participation of the student through questions and discussions brief.

Laboratory (15 hours)

The student will have the resources necessary for the implementation of the practice, which will have to prepare in advance.

Other activities

You will be able to count on a non-presential (personal work of the pupil) and a classroom portion (whose hours are already accounted for in paragraphs practical classes, problems and Laboratory)

Evaluation

In addition to the rating function, the evaluation is also a learning tool with which the student verifies the degree of understanding and assimilation that has reached.

Mentoring

Direct attention to the student, identification of learning problems, guidance on the subject, attention to exercises and works.

Personal Work (20 non-presential hours)

Periodically will be proposed to the student exercises and cases to develop for his personal work. This section also includes the preparation of laboratory practices and additional activities

Individual study (70 non-presential hours).

It will encourage the continuous work of the student through the homogeneous distribution along the half of the various learning activities.

5.3.Syllabus

The contents that develop are detailed in the program of the course and are structured in the next thematic blocks:

1. Industrial maintenance

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2. Planning and Scheduling in Industrial Maintenance
3. Management of Industrial Maintenance
4. Scope of application of electrical maintenance
5. Measurement techniques used in electrical maintenance
6. Electrical risks and safety in electrical installations
7. Corrective Maintenance in electrical systems.
8. Preventive and predictive maintenance in electrical systems.

5.4.Course planning and calendar

The lecture and problems classes and the practice sessions in the laboratory are taught according to schedule established by the Center and it's published prior to the start date of the course (eina.unizar.es).

Each teacher will inform of their hours of tutoring attention.

The other activities will be planned based on the number of students and will be released with the sufficient advance.

5.5.Bibliography and recommended resources

[BB: Bibliografía básica / BC: Bibliografía complementaria]

- [BB] Bona, José María de. La gestión del mantenimiento : guía para el responsable de la conservación de locales e instalaciones : criterios para subcontratación / José María de Bona Madrid : Fundación Confemetal, D.L. 1999
- [BB] González Fernández, Francisco Javier. Teoría y práctica del mantenimiento industrial avanzado / Francisco Javier González Fernández . 4ª ed. Madrid : Fundación Confemetal, D.L. 2011
- [BB] Rey Sacristán, Francisco. Mantenimiento total de la producción (TPM) : proceso de implantación y desarrollo / Francisco Rey Sacristán Madrid : Fundación Confemetal, D.L. 2001