SUBJECT TEACHING GUIDE

M1214 - Installations and Transport

Master's Degree in Industrial Engineering

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Master's Degree in Industrial Engineering			Type and Year	Compulsory. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Installations Installations, Plants and Complementary Buildings				
Course unit title and code	M1214 - Installations and Transport				
Number of ECTS credits allocated	5	Term		Semester based (2)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ELECTRICA Y ENERGETICA
Name of lecturer	ALFREDO ORTIZ FERNANDEZ
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Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 2. DESPACHO PROFESOR (S2029)
Other lecturers	JOSE MARIA DIAZ PEREZ DE LA LASTRA PEDRO BENITO GANCEDO CARLOS LIAÑO FERNANDEZ

3.1 LEARNING OUTCOMES

- The students will adquire the necessary knowledge for calculation and integration of industrial and residential facilities in buildings.

4. OBJECTIVES

The basic objective of the course is to show students the knowledge and skills necessary to plan and design electrical and fluid facilities, lighting, air conditioning and ventilation, energy saving and efficiency, acoustics, communications, automation and intelligent buildings and security facilities. The methods and techniques of transportation and industrial maintenance will be also explained.

6. COURSE ORGANIZATION

CONTENTS	
1	Industrial facilities. General concepts.
2	Electrical Installations and Lighting
3	Thermal and fluid installations.
4	Communication facilities.
5	Acoustic and security installations.
6	Home automation and intelligent buildings.
7	Transportation and industrial maintenance.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Electrical Installations Assessment	Written exam	No	Yes	30,00
Other Facilities Assessment	Written exam	No	Yes	40,00
Transport Assessment	Work	Yes	Yes	30,00
TOTAL				100,00

Observations

Students can pass the subject in two ways:
1- Continuous assessment
To pass on this way, attendance to, at least, 80% of the activities is required. Students must pass the Electrical Installations, Other Facilities and Transportation assessments. The minimum grade to get in each block is 4/10 points, in order to calculate the final grade for the course. Blocks with more than 5/10 points may keep the grade in September assessment.
2- Final exam
Students who have not followed or passed the continuous assessment, must pass the final examination of the whole subject, in which must obtain a result equal to or greater than 5 out of 10.

Observations for part-time students

Part-time students are subject to the same conditions as full-time.

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
Ballou, R. Logística Empresarial. Control y planificación. Díaz de Santos, 1991.
Ballou, R. Logística. Administración de la cadena de suministro. Pearson, Prentice Hall, 2004.
Ghiani, G. et al. Introduction to logistics systems, planning and control. Wiley & Sons Ltd 2003.
Langevin, A. y Riopel, D. Logistics systems: Design and Optimization. Springer 2005
Rushton, A. et al. Logistics and distribution management. Ed. Kogan Page Limited, 2000
Colección Ashrae Handbooks.
Reglamento Electrotécnico de Baja Tensión. 2002.
Instalaciones Eléctricas. McGrawHill. A.J.Conejo. 2007.
Cálculo y normativa básica de las Instalaciones en los Edificios. Vol I y II. Jesús Arizmendi.
Manual de Instalaciones Receptoras. Gas Natural
Código Técnico de la Edificación
Diseño y cálculo de instalaciones de gases combustibles. Redes, -Ed PEARSON, A.M. Romero, P Arrué
Manual de Instalaciones de calefacción por agua caliente, Ed AMV, F. Martín
Instalaciones domóticas. Marcombo. Antonio Rodríguez Arenas. 2010
Reglamento de instalaciones térmicas en edificios.
Colección Normas UNE.