

SUBJECT TEACHING GUIDE

G607 - Transport, Distribution and Energy Logistics

Degree in Energy Resources Engineering

Academic year 2019-2020

1. IDENTIFYING DATA					
Degree	Degree in Energy Resources Engineering			Type and Year	Compulsory. Year 4
Faculty					
Discipline	Subject Area: Advanced Electrical Technology Module: Training in Energy Resources, Fuels and Explosives				
Course unit title and code	G607 - Transport, Distribution and Energy Logistics				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ELECTRICA Y ENERGETICA				
Name of lecturer	JUAN CARCEDO HAYA				
E-mail	juan.carcedo@unican.es				
Office	E.P. de Ingeniería de Minas y Energía. Planta: + 1. DESPACHO 18 - I. AMBIENTAL (131)				
Other lecturers	RAMON LECUNA TOLOSA				

3.1 LEARNING OUTCOMES

- Knowledge of the organization of the national energy system
- Characterization of own energy resources and energy dependence
- Knowledge of operating regulations and fuel logistics

4. OBJECTIVES

- Characterization and recognition of the different elements of an electrical network
- Sizing and organization of an electric transport system
- Recognition of the various equipment involved in a gas transport network
- Calculation of a gas distribution network
- Knowledge of regulations and management of transport and storage of fuels

6. COURSE ORGANIZATION

CONTENTS

1	TRANSPORT AND DISTRIBUTION OF ELECTRICAL ENERGY Introduction to electrical power systems. High voltage power lines. Substations. Processing centers. Low voltage installations.
2	TRANSPORT AND DISTRIBUTION OF COMBUSTIBLE GASES Introduction to combustible gas networks. Natural gas installations. LPG and CNG installations.
3	LOGISTICS OF FUELS Concept and applications of logistics. Supply management. Management models and stock types. Distribution management and route planning. International Trade.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
PERIODIC ASSESSMENTS (NON ELIMINATING)	Written exam	No	Yes	40,00
FINAL EXAM. To pass the final exam it is necessary to obtain a minimum of 4 out of 10 on each part (electrical energy AND fuels). If not, this exam will not be considered when calculating the total mark.	Written exam	Yes	Yes	60,00
TOTAL				100,00
Observations				
Students pass the course if they obtain an average mark of 5. This mark is the result of average the periodic assessments (40%) and the final exam (60%)				
Observations for part-time students				
Part-time students can do an exam which evaluates all the topics covered by the course (as well as practical activities). For this purpose the student must communicate his choice to the teacher by email before the final exam date.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- "Sistemas de Energía Eléctrica". F. Barrero. 2004. Madrid. Thomson
- "Sistemas Eléctricos de Potencia". L.G. Vega Argüelles. 1989. E.T.S.I.C.C.P. Santander
- "Manual de Instalaciones Eléctricas". D. Carmona Fernández. 2004. Badajoz
- "Estaciones de Transformación y Distribución, Protección de Sistemas Eléctricos". J. Ramírez Vázquez. 1988. Barcelona. CEAC
- "Tecnología Energética". V. Bermúdez Tamarit. 2000. Servicios de Publicaciones UPV.
- "Diseño y cálculo de instalaciones de gases combustibles: Redes". A.M. Romero. 2007

