

SUBJECT TEACHING GUIDE

G604 - Nuclear Engineering

Degree in Energy Resources Engineering

Academic year 2021-2022

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	G604 - Nuclear Engineering				
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	RAQUEL MARTINEZ TORRE				
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Other lecturers	CRISTIAN OLMO SALAS				

3.1 LEARNING OUTCOMES
- Basic knowledge of nuclear physics principles
- Knowledge about different nuclear generation technologies.
- Knowledge about nuclear power plant operation, as well as the nuclear safety and radiation protection measures that are taken.

4. OBJECTIVES
- To provide students a basic/medium knowledge about a current energy source, the nuclear power.
- To train students for professional practice in a sector with demand of technicians graduated or postgraduated .

6. COURSE ORGANIZATION

CONTENTS	
1	SECTION I. Nuclear physics
2	SECTION II. Nuclear fuel
3	SECTION III. Reactor Theory
4	SECTION IV. Nuclear safety

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Simulation practices	Activity evaluation with Virtual Media	No	No	20,00
Complementary activities	Others	No	No	10,00
Theoretical & practical exam 1	Written exam	No	Yes	30,00
Theoretical & practical exam 2	Written exam	No	Yes	40,00
TOTAL				100,00
Observations				
If student does not pass the minimum grades established, the overall grade will be obtained as the minimum value between 4.9 and the weighted average of the different grades.				
Observations for part-time students				
Part-time students will be assessed as follows: -Attendance to the simulation practices, having to satisfactorily overcome them according the same criteria established for full-time students. If the student can not attend to the simulation practices, the student has the right to be evaluated through a simulation selected by the lecturer. Percentage value of this test over the final grade: 20%. -Performing the examination in official date. Percentage value of test 1 35 % and test 2 45 %.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- Nuclear physics and reactor theory. DOE fundamentals hanbook. Vol. 1 y 2. U.S. Department of Energy. 2009
- Introduction to Nuclear Engineering. John R. Lamarsh, Anthony J. Baratta. Editorial: Prentice Hall, 3ª Ed. 2001