SUBJECT TEACHING GUIDE

G95 - Topology

Double Degree in Physics and Mathematics
Degree in Mathematics

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Double Degree in Physics and Mathematics Degree in Mathematics			Type and Year	Compulsory. Year 2 Compulsory. Year 2
Faculty	Faculty of Sciences				
Discipline	Subject Area: Geometry and Topology Module: Compulsory Subjects				
Course unit title and code	G95 - Topology				
Number of ECTS credits allocated	6	Term		Semester based (1)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. MATEMATICAS, ESTADISTICA Y COMPUTACION
Name of lecturer	NURIA CORRAL PEREZ
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Other lecturers	

3.1 LEARNING OUTCOMES
- To know and to be able to use the basic ideas asociated to metric spaces, topological spaces and continuous maps.
- To be able to give examples of topological spaces which are a topological subspace, a product space or a quotient one.
- To know the basic topological properties of compacity and connectedness, and recognise them in examples.

4. OBJECTIVES

Topological spaces appear in almost all mathematic areas, thus the student should learn how to work with these structures and be able to recognise their basic properties.

This subject should help the student to develop his abstraction ability.

Show the students the importance of the ideas that appear in the proofs of the results in order to better understand new definitions

6. COURSE ORGANIZATION

CONTENTS	
1	Review of set theory
2	Metric spaces
3	Topological spaces
4	Continuous maps
5	Compacity and Connectedness
6	Product of topological spaces. Quotient spaces.
7	Final exam

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Partial Exam	Written exam	No	Yes	40,00
Final Exam	Written exam	Yes	Yes	60,00
TOTAL				100,00

Observations

To determine the result of the written exams the teacher could ask the students to explain it in an oral exam .

The final grade will be the maximum of the result achieved in the final exam and the one obtained by a weighted combination of the different proofs described above (where it is necessary a grade of 4 over 10 in the Final Exam, otherwise the final grade will be the minimum between 4,9 and the weighted combination of the different proofs).
The final grade in the Extraordinary Evaluation is determined by the grade achieved in the corresponding final exam.
Use of notes or written material is not allowed during the exams.

Observations for part-time students

These students can choose between the evaluation system of regular students and one in which they only need to do the final exam and receive its grade as their final grade.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

J. R. Munkres: Topología. 2ª edición, Prentice-Hall, Madrid 2001.

E. Outerelo Domínguez; J. M. Sánchez Abril: Elementos de Topología. Editorial Sanz y Torres, 2008.