27034 - Functional Analysis

Información del Plan Docente

Academic Year	2018/19
Subject	27034 - Functional Analysis
Faculty / School	100 - Facultad de Ciencias
Degree	453 - Degree in Mathematics
ECTS	6.0
Year	4
Semester	First semester
Subject Type	Optional
Module	---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The subject is explained in two ways. There are theoretical lectures devoted to the main concepts and fundamental results, and practical classes where the students practice and solve exercises which develop the content of the subject.

Several references are given, to be followed or considered by the students, as a complement to those aspects of the subject explained in the classroom.

4.2.Learning tasks

Concrete activities in the classroom, as well as homework, will be explained by the teacher once the course had started.

4.3.Syllabus

1. Hilbert spaces.

2. Banach spaces; fundamental theorems.

3. Locally convex spaces.

4. Applications.

4.4.Course planning and calendar

There are four lectures per week, lasting for one hour each, during the first term.

Timetable for exams and dates involved can be seen, in due time, in the web page
http:\\ciencias.unizar.es\web\horarios.do

4.5.Bibliography and recommended resources
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o Análisis funcional / Bernardo Cascales Salinas ... [et al.] Murcia : Electrolibris ; [Madrid] : Real Sociedad Matemática Española, D.L. 2013.
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Rudin, Walter: Análisis real y complejo / Walter Rudin ; traducción José María Martinez Ansemil . - 3a. ed. Madrid[etc] : McGraw-Hill, cop.1987.

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Conway, John B.: A course in functional analysis / John B. Conway New York : Springer, 1985.

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Meise, R. y Vogt, D.: Introduction to Functional Analysis, Oxford Sci. Pub.,Clarendon Press, 1997.

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Horvath, J.: Topological Vector Spaces and Distributions, Addison Wesley, 1966.