27034 - Functional Analysis

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	453 - Degree in Mathematics
ECTS	6.0
Course	4
Period	First semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

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.

5.2.Learning activities

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

5.3.Program

1. Hilbert spaces.

2. Banach spaces; fundamental theorems.

3. Locally convex spaces.

4. Applications.

5.4.Planning and scheduling

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

5.5.Bibliography and recomended resources

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

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

  o Rudin, Walter: Functional Analysis, McGraw-Hill, 1973.

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

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