

27021 - Lebesgue Integral

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	Half-yearly
Subject Type	Compulsory
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

Theoretical and problem sessions on the blackboard.

Use of moodle for communicating and displaying learning material.

Mentoring.

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5.2.Learning activities

Master classes on theoretical results and key problems.

Problem sessions to understand and apply the theoretical results.

Problem assignments for individual work.

Individual tutoring.

See http://www.unizar.es/analisis_matematico/docencia.html and <https://moodle2.unizar.es/> for more information and resources.

5.3.Program

- 1) Measures.
- 2) Measurable functions. Integration with respect to a measure.
- 3) L_p spaces.
- 4) Decomposition of measures.
- 5) Radon-Nikodym and Lebesgue theorems.
- 6) Product measure. Fubini theorem.

5.4.Planning and scheduling

Four hours weekly of master classes during the second semester.

Exam period and dates and the academic calendar is available at the Faculty of Science web page, <http://ciencias.unizar.es/web/horarios.do>

5.5.Bibliography and recommended resources

Bartle, Robert G. A modern theory of integration. GSM-32, Amer. Math. Soc. 2001

Bressoud, David, M. A radical approach to Lebesgue's theory of integration. Cambridge 2008

Chae, Soo Bong Lebesgue integration. Springer-Verlag 1995

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Letac, G. Integration and probability. Exercises and solutions. Springer-Verlag 1995

Tao, T. An introduction to measure theory. GSM-126, Amer. Math. Soc. 2011

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