



1. General information

Course: LINEAR ALGEBRA II

Type: BASIC

Degree: 423 - UNDERGRADUATE DEGREE IN MATHEMATICS

Center: 603 - E.T.S. CIVIL ENGINEERS OF CR

Year: 1

Main language:

Use of additional languages:

Web site:

Code: 38505

ECTS credits: 6

Academic year: 2023-24

Group(s): 20

Duration: C2

Second language:

English Friendly: Y

Bilingual: N

Lecturer: JAVIER SÁNCHEZ GONZÁLEZ - Group(s): 20

Building/Office	Department	Phone number	Email	Office hours
	MATEMÁTICAS		Javier.SGonzalez@uclm.es	

2. Pre-Requisites

These are those associated with standard subjects in a technological secondary school line, in addition to a certain degree of maturity in the contents of the mate subject Linear Algebra I.

3. Justification in the curriculum, relation to other subjects and to the profession

Linear Algebra is probably one of those basic disciplines that are at the foundation of all Mathematics and Science. Its concepts and results permeate methods in more advanced fields like Differential Equations or Functional Analysis to name two of the most representative. Its relevance is such that other areas cannot be dispensed with its support.

4. Degree competences achieved in this course

Course competences

Code	Description
INFO-2023	

5. Objectives or Learning Outcomes

Course learning outcomes

Description

6. Units / Contents

Unit 1: Linear functions and dual spaces

Unit 2: Endomorphisms and their structure

Unit 3: Bilinear and quadratic forms

Unit 4: Orthogonality

Unit 5: Euclidean vector spaces

Unit 6: Tensor Algebra

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures		1.76	44	Y	N	
Problem solving and/or case studies [ON-SITE]	Project/Problem Based Learning (PBL)		0.6	15	Y	N	
Computer room practice [ON-SITE]	Practical or hands-on activities		0.04	1	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study		3.6	90	Y	N	
Total:			6	150			
Total credits of in-class work: 2.4			Total class time hours: 60				
Total credits of out of class work: 3.6			Total hours of out of class work: 90				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System			
Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	70.00%	90.00%	
Progress Tests	20.00%	0.00%	
Assessment of problem solving and/or case studies	10.00%	10.00%	
Total:	100.00%	100.00%	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

Evaluation criteria for the final exam:

Continuous assessment:

These are precisely expressed in the evaluation method.

Non-continuous evaluation:

These are precisely expressed in the evaluation method.

Specifications for the resit/retake exam:

Treatment for the extraordinary evaluation is similar to the ordinary one.

Specifications for the second resit / retake exam:

Treatment for the extraordinary evaluation is similar to the ordinary one.

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	44
Problem solving and/or case studies [PRESENCIAL][Project/Problem Based Learning (PBL)]	15
Computer room practice [PRESENCIAL][Practical or hands-on activities]	1
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Global activity	
Activities	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	44
Computer room practice [PRESENCIAL][Practical or hands-on activities]	1
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Problem solving and/or case studies [PRESENCIAL][Project/Problem Based Learning (PBL)]	15
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
M. Castellet, I. Llerena	Álgebra Lineal y Geometría	Reverté, UAB	Barcelona		2000	Referencia obligada para esta asignatura.
Juan de Burgos Román	Álgebra Lineal y Geometría Cartesiana	McGraw-Hill España			2013	Libro básico esencial y completo para las necesidades de esta materia.
K. Hoffman, R. Kunze	Linear Algebra	Prentice Hall, Inc	Englewood Cliffs, NJ, USA		1971	Texto esencial para esta materia.