

SUBJECT TEACHING GUIDE

G350 - General Mathematics

DOUBLE DEGREE IN ADMINISTRATION AND BUSINESS MANAGEMENT AND ECONOMICS

DOUBLE DEGREE IN ADMINISTRATION AND BUSINESS MANAGEMENT AND ECONOMICS

Academic year 2023-2024

Degree in Economics

1. IDENTIFYING DATA					
Degree	DOUBLE DEGREE IN ADMINISTRATION AND BUSINESS MANAGEMENT AND ECONOMICS			Type and Year	Core. Year 1 Core. Year 1
Faculty	Faculty of Economics and Business Studies				
Discipline	Subject Area: Mathematics Basic Training Module				
Course unit title and code	G350 - General Mathematics				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. MATEMATICA APLICADA Y CIENCIAS DE LA COMPUTACION				
Name of lecturer	MARIA PATRICIA GOMEZ GARCIA				
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Office	Edificio de las Facultades de Derecho y Ciencias Económicas y Empresariales. Planta: + 1. DESPACHO DE UFG 20 (C132)				
Other lecturers	CARMEN MARIA SORDO GARCIA SARA PEREZ CARABAZA				

3.1 LEARNING OUTCOMES

- To solve mathematical and economical problems applying Analysis and Lineal Algebra techniques.

4. OBJECTIVES

To know how to use mathematical knowledge to solve economic problems.
To apply mathematical software to the resolution of mathematical problems.

6. COURSE ORGANIZATION	
CONTENTS	
1	Lineal Algebra: Matrices. Linear systems.
2	Lineal Algebra: Vector spaces. Matrix diagonalization.
3	Real numbers: intervals, absolute value.
4	Real-valued functions of a real variable: Limit. Continuity.
5	Differential calculus.
6	Real number sequences and series.
7	Integration: Riemann integral. Antiderivative.

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Maxima test.	Laboratory evaluation	No	No	5,00
To solve mathematical problems using Maxima.	Laboratory evaluation	No	No	5,00
Partial exam (Lineal Algebra)	Written exam	No	Yes	30,00
Partial exam (Real numbers, Real-valued functions of a real variable: Limit. Continuity. Derivative of a function. Derivability).	Written exam	No	Yes	30,00
Partial exam (Properties of the derivative. Graph of a function. Real number sequences and series. Integration: Riemann integral. Antiderivative.)	Written exam	No	Yes	30,00
TOTAL				100,00
Observations				
Observations for part-time students				

8. BIBLIOGRAPHY AND TEACHING MATERIALS**BASIC**

1. Barbolla, R. y Sanz, P. (1998). Álgebra lineal y teoría de matrices. Ed. Prentice Hall.
2. Bradley, G. L. y Smith, K. J. (1998). Cálculo de una variable, I. Ed. Prentice Hall.
3. Bradley, G. L. y Smith, K. J. (1998). Cálculo de varias variables, II. Ed. Prentice Hall.
4. Caballero, R. E., Calderón, S. y Galache, T. P. (2000). Matemáticas aplicadas a la economía y a la empresa. 434 ejercicios resueltos y comentados. Ed. Pirámide
5. Granero Rodríguez, F. (1991). Ejercicios y problemas de cálculo. Ed. Tebar-Flores.
6. Grossman, S. I. (1997). Álgebra lineal. Ed. McGraw-Hill.
7. Hernández, E. (1999). Álgebra y geometría. Ed. Addison-Wesley/U.A.M.
8. Hoffmann, L. D. y Bradley, G. L. (1998). Cálculo para administración, economía y ciencias sociales. Ed. McGraw-Hill.
9. Kolman, B. (1999). Álgebra lineal con aplicaciones y Matlab. Ed. Prentice Hall.
10. Kolman, B. y Hill, D. R. (2006). Álgebra lineal. Ed. Pearson Educación de México.
11. Martínez Salas, J. (1992). Elementos de matemáticas. Ed. Lex Nova.
12. San Millán, M. A. y Viejo, F. (1992). Introducción a la Economía Matemática. Ed. Pirámide.
13. Sanz, P., Vázquez, F. J. y Ortega, P. (1998). Álgebra lineal. Cuestiones, ejercicios y tratamiento en Derive(R). Ed. Prentice Hall.
14. Sanz, P. y Vázquez, F. J. (2013). Álgebra lineal. 450 cuestiones y problemas resueltos. Ibergaceta, D. L.
15. Sydsaeter, K., Hammond, P. y Carvajal, A. (2012). Matemáticas para el análisis económico, 2ª ed. Ed. Pearson Educación.