

SUBJECT TEACHING GUIDE

1491 - Statistical Methods in Engineering

Master's Degree in mining engineering

Academic year 2025-2026

1. IDENTIFYING DATA					
Degree	Master's Degree in mining engineering			Type and Year	Compulsory. Year 1
Faculty	School of Mines and Energy Engineering				
Discipline					
Course unit title and code	1491 - Statistical Methods in Engineering				
Number of ECTS credits allocated	3	Term	Semester based (2)		
Knowledge Field	Architecture, construction, building and urban planning, civil engineering				
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. MATEMATICA APLICADA Y CIENCIAS DE LA COMPUTACION				
Name of lecturer	ENRIQUE RODRIGUEZ FERNANDEZ				
E-mail	enrique.rodriguez@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 1. DESPACHO PROFESORES (1038)				
Other lecturers	SIXTO HERRERA GARCIA				

4. OBJECTIVES

The objective of the course is to complement the mathematical training of the degree with statistical techniques applied to Mining and Energy engineering.

6. SUBJECT PROGRAM

CONTENTS

1	Block I: Statistics. Common distributions in Mining and Energy Engineering. Statistics of extreme values. Quality control.
2	Block II: Geostatistics

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Block I exam	Written exam	Yes	Yes	35,00
Block II exam	Written exam	Yes	Yes	15,00
Assignments and follow-up activities Block I	Others	No	Yes	35,00
Geostatistics assignment	Work	No	Yes	15,00
TOTAL				100,00
Observations				
Observations for part-time students				
Part-time enrolled students will be able to follow the course like any other student, as all the material will be available on the virtual Moodle platform, and they will be assessed with the same tests and assignments as full-time students. Attendance will be required for written exams.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Hengl T (2009) A practical guide to geostatistical mapping.
ISBN 978-90-9024981-0 <http://spatial-analyst.net/book/system/files/Hengl_2009_GEOSTATE2c1w.pdf>

Castillo E, Pruneda RE (2001) Estadística Aplicada

Castillo E, Hadi AS, Balakrishnan N, Sarabia JM (2004) Extreme Value and Related Models with Applications in Engineering and Science.