

SUBJECT TEACHING GUIDE

M1461 - Cartographic and Graphic Engineering

Master's Degree in Civil Engineering

Academic year 2019-2020

1. IDENTIFYING DATA					
Degree	Master's Degree in Civil Engineering			Type and Year	Optional. Year 2
Faculty	School of civil Engineering				
Discipline	Optional Training				
Course unit title and code	M1461 - Cartographic and Graphic Engineering				
Number of ECTS credits allocated	3	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA GEOGRAFICA Y TECNICAS DE EXPRESION GRAFICA				
Name of lecturer	RAUL PEREDA GARCIA				
E-mail	raul.pereda@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO (2030)				
Other lecturers	VICTOR MANUEL GIL ELIZALDE				

3.1 LEARNING OUTCOMES

- Knowledge of standards and methods of BIM and IFC
- Practise in BIM applications, particularly REVIT Structural
- Knowledge of the main procedures of cartographic modelling
- Practise with vector based cartography tools, SIG, aerial and satelital imagery, etc.

4. OBJECTIVES

The students will know the scientific and technic foundation of BIM modelling tools and cartography modelling tools. Also they will be skilled enough as users.
As a result, the students will boost their capabilities in using advanced technical media, what will provide them with an added value as professionals of civil engineering.

6. COURSE ORGANIZATION

CONTENTS

1	BIM modelling in civil engineering The IFC and BIM data models The user interface of a BIM application Design Laboratory with REVIT Other remarkable BIM applications and methodologies
2	Cartographic modelling in civil engineering Data model Basic methodologies
3	Review and support in students' learning

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Laboratory exam	Laboratory evaluation	No	Yes	100,00
TOTAL				100,00
Observations				
Attending all the classess is very necessary				
Observations for part-time students				
All the classes have a high practical content. Part-time enrolled students must talk to the lecturer in charge at the beginning of the course for explaining their particular situation and receive suggestions and instructions.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

MANUALES REVIT
INDUSTRY FOUNDATION CLASSES STANDARD
MANUALES DE SOFTWARE CARTOGRÁFICO
GEODESY. THE CONCEPT. PETR VANICEK