SUBJECT TEACHING GUIDE

G1984 - Geotechnics

Degree in Civil Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Civil Engineering			Type and Year	Compulsory. Year 4
Faculty	School of civil Engineering				
Discipline	WORKS ENGINEERING				
Course unit title and code	G1984 - Geotechnics				
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. CIENCIA E INGENIERIA DEL TERRENO Y DE LOS MATERIALES
Name of lecturer	ALMUDENA DA COSTA GARCIA
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Other lecturers	JORGE CAÑIZAL BERINI MARINA MIRANDA MANZANARES

3.1 LEARNING OUTCOMES
- Site investigation
- Elasticity and plasticity applied to soils
- Earth pressures acting on retaining walls
- Rigid and flexible walls
- Shallow and deep foundations
- Slope instabilities in soils
- Slope instabilities in soils

4. OBJECTIVES

Planning site investigation. Methods for site investigation.
Design of geotechnical works (foundations, retaining walls, soil slopes)

6. COURSE ORGANIZATION

CONTENTS	
1	Site investigation
2	Elasticity
3	Plasticity
4	Earth pressures. Rigid walls
5	Flexible walls
6	Shallow foundations
7	Deep foundations
8	Soil slopes

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Exam units 1 to 5	Written exam	No	Yes	40,00
Exam units 6 to 8	Written exam	Yes	Yes	40,00
Project on deep foundations	Work	No	No	10,00
Project on flexible walls	Work	No	No	10,00
TOTAL				100,00

Observations

Observations for part-time students

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8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Fundamentals of Geotechnical Analysis. I.S. Dunn, L.R. Anderson, F.W. Kiefer. Wiley, 1980.
Geotechnical engineering. R. Lancellotta. Editorial Rotterdam: A.A. Balkema, 1995.
Foundation analysis and design. J.E. Bowles. Mc Graw-Hill, 1982.
Fundamentals of Geotechnical Engineering. B.M. Das. Thomson cop., 1998.
Guía de cimentaciones en obras de carretera. Ministerio de Fomento, 2003.
Geotecnia y Cimientos II. Mecánica del suelos y de las rocas. J.A. Jiménez Salas, J.L. de Justo Alpañés y A.A. Serrano. Editorial Rueda, 1976