UNIVERSIDADE DA CORUÑA

Teaching Guide				
Identifying Data				2023/24
Subject (*)	Assessment and Underpinning of Foundations		Code	630548018d
Study programme	Máster Universitario en Rehabilitación Arquitectónica (a distancia)			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Obligatory	3
Language	SpanishGalician			
Teaching method	Non-attendance			
Prerequisites				
Department	Construcións e Estruturas Arquitectónicas, Civís e AeronáuticasEnxeñaría Civil			
Coordinador	Muñiz Gomez, Santiago	E-mail	santiago.muniz@udc.es	
Lecturers	Muñiz Gomez, Santiago	E-mail	santiago.muniz@udc.es	
Web				
General description	It is intended that the student is qualified to can make the diagnostic with solvency for the problems that can cause the soil on the rehabilitation work and propose safe, viable and suitable solutions to the architectural design within the rehabilitation project. For that, it is necessary the precise knowledge refered to the recognition of soils, the diagnosis of pathology linked to the ground and the basic and advanced techniques, what will be exposed in the classes of theory. At the time the student must know how to translate this knowledge into concrete techniques, for which they propose a series of practical classes and the accomplishment of a concrete work. This work should be related to the professional activity of the architect, within the specific content of this subject.			

Study programme competences / results	
Code	Study programme competences / results

Learning outcomes			
Learning outcomes	Study programme competences / results		
At the end of the course, the student is expected to be able to diagnose with solvency the problems that the terrain may cause on the rehabilitation work and propose safe, viable and adequate solutions to the architectural aspects within the rehabilitation project. For this, it is necessary that you acquire the necessary knowledge regarding soil recognition, the diagnosis of pathology linked to the terrain and the basic and advanced techniques of stress, which will be exposed in the theory classes. At the same time, the student must know how to translate this knowledge into specific techniques, for which a series of practical classes and the completion of a specific job are proposed. This work must be related to the professional activity of the architect, within the specific content of this subject.	AJ11 AJ11	BJ7 BJ7 BJ7 BJ7 BJ7	CJ16 CJ16 CJ16 CJ16 CJ16 CJ16

Contents	
Topic	Sub-topic
PATHOLOGIES DUE TO THE FOUNDATION	-General features ?Soil pathology ?Excavation pathology ?Pathology of foundations ?Pathology of containment systems ?Pathology of foundation and shoring screens ?Project, calculation and execution errors
SPECIAL TECHNIQUES FOR FLOOR RECOGNITION IN REHABILITATION	Basic Geology Geotechnical studies. Soil exploration methods
SURFACE UNDERPINNING	Surface underpinning

DEEP UNDERPINNING	Deep wells Piles Micropiles Repair of walls Atypical underpinning
SOIL IMPROVEMENT TECHNIQUES	Soil improvement Foundations on expansive soils Foundations on collapsible soils Foundations on fillings Special and singular cases

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech	C1 C4 C5	0	18	18
Problem solving	B1 B2 B3 B4 B5 C1 C4 C5 C6 C12 C13	0	10	10
Supervised projects	A5 A8	0	42	42
Personalized attention		5	0	5
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	The development of the subject is structured around theory sessions, although with an important component of practices carried out by the student / teacher, in addition to the corresponding tutorials and assignments. The teaching will also include the analysis of practical cases already carried out, which allow complementing the knowledge acquired throughout the course.
Problem solving	The course is complemented by the development by the student of a reinforcement project, which allows to specify the possibilities of action and which involves the acquisition of the corresponding skills. This practice, which will be continuously monitored throughout the course, will be the basis for the grade of the subject. Parts of this work will be carried out on a weekly basis, usually with weekly deliveries, which will become part of the overall practice of the course.
Supervised projects	Carrying out a reinforcement project that summarizes the practices developed throughout the course

Personalized attention	
Methodologies	Description
Guest lecture / keynote speech Supervised projects Problem solving	The tutorials are intended to be a fundamental source of knowledge of this subject, since they will allow to focus the student's work and to solve its particular problems regarding the work to be done during the course.

Assessment			
Methodologies	Competencies / Results	Description	**Qualification**
Guest lecture / keynote speech	C1 C4 C5	Regular attendance and participation in the development of theoretical classes	0
Supervised projects	A5 A8	Course Global Practice Review	70
Problem solving	B1 B2 B3 B4 B5 C1 C4 C5 C6 C12 C13	Review of weekly practices and activities	30
Others			

Assessment comments
Criteria to be applied to students with an attendance greater than 80% Students with recognition of part-time dedication and academic exemption from attendance: In the case of these students, they must carry out the partial practices that will count 30% and also the global practice that will count 70%. The work will be monitored in order to see its evolution and the confirmation of its authorship by the student. Weekly practices cannot be delivered after the deadline. The global practice can be provided before the 2nd opportunity if it is intended to attend said call, provided that there has been a follow-up of it throughout the course. This is applicable to the advance call. Failure to deliver the global practice implies a qualification of no-show. Regardless of what is legally indicated on possible teacher-type fraud, any of the following situations will be considered as serious disciplinary offenses and, consequently, the automatic qualification of SUSPENSION (0): -Impersonation of a partner in attendance checks or activities -this fault extends to both the impersonating student and the impersonating student. -Fraudulent performance of practices and controls by a person other than the signing student. -Copy of practices. -Copy of exams. -Equivalent situations -Plagiarism

Sources of information	
Basic	Bibliografía básica - Jiménez Salas, J. et allii "Geotecnia y cimientos". Editorial Rueda. Madrid 1981. - Rodríguez Ortiz, J.M. "La cimentación". Curso de Rehabilitación. Colegio Oficial de Arquitectos de Madrid. Madrid 1984. - Pérez Valcarcel J. "Excavaciones urbanas y estructuras de contención". Ediciones CAT. Colegio Oficial de Arquitectos de Galicia. Santiago 2005. - González Caballero, M. "El terreno". Ediciones UPC. Barcelona 2001. Bibliografía complementaria - González de Vallejo, L.; Ferrer, M.; Ortuño L.; Oteo, C. "Ingeniería geológica". Prentice Hall. Madrid. 2002. - Tomlinson, M.J. "Diseño y construcción de cimientos". Ediciones Urmo. Bilbao 1982. - Braja M. Das ?Principios de ingeniería de cimentaciones?. Ed Thomson. Méjico 2006.
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Building Inspection/630567110
Subjects that are recommended to be taken simultaneously
Materials deterioration and traditional building technology/630567113
Subjects that continue the syllabus
Damage and Restoration of Concrete Structures/630567120
Other comments