



## ANNEX 2.1

### DEGREE PROGRAM DIDACTIC REGULATIONS

### INGEGNERIA STRUTTURALE E GEOTECNICA (STRUCTURAL AND GEOTECHNICAL ENGINEERING)

### CLASS LM-23

**School:** Polytechnic and Basic Sciences

**Department:** Structures for Engineering and Architecture

**Didactic Regulations in force since the academic year 2026/2027**

<b>Course:</b> Static and seismic foundation design	<b>Teaching Language:</b> English
<b>SSD (Subject Areas):</b> CEAR-05 Geotechnical Engineering	<b>CREDITS:</b> 9
<b>Course year:</b> First	<b>Type of Educational Activity:</b>
<b>Teaching Methods:</b> In-person, with the aid of slides and blackboard.	
<b>Contents extracted from the SSD declaratory consistent with the training objectives of the course:</b> The course covers the analysis, design, and construction techniques of both shallow and deep foundations, as well as the evaluation of their performance under static and seismic loading	
<b>Objectives:</b> The first part of the course provides the knowledge required for the design, monitoring, and upgrading of foundations under static conditions. Foundations interact with both the superstructure and the subsoil, and a proper design must account for these interactions. To achieve this objective, students are introduced to the relevant theories and their fields of application, as well as to the most commonly used calculation procedures required to meet the provisions of current design standards. The second part of the course aims to provide the knowledge necessary for the analysis of seismic geotechnical problems, with reference to both shallow and deep foundations. In particular, for both foundation types, dynamic soil–foundation–structure interaction is analyzed using methods characterized by different levels of complexity and detail.	
<b>Propaedeuticities:</b> Geotechnics <b>Is a propaedeuticity for:</b> none	

**Types of examinations and other tests:** The final assessment test will be oral, consisting of a questions and answers session on the above topics and may include a discussion on the assigned homework.