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| <b>Course:</b><br>Structural Analysis and Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>Teaching Language:</b><br>English   |  |
| <b>SSD (Subject Areas):</b> CEAR-07/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>CREDITS:</b> 9                      |  |
| <b>Course year:</b> I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>Type of Educational Activity:</b> C |  |
| <b>Teaching Methods:</b> in-person                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                        |  |
| <b>Contents extracted from the SSD declaratory consistent with the training objectives of the course:</b><br>Among the main educational objectives set out in the SSD declaration is the study of theories and techniques aimed both at the structural conception and design of new constructions, and at the structural assessment of existing ones. The course will cover topics related to the evaluation of actions on structures, including the effects of seismic loading, the behaviour of structures and materials, and the methods and tools for structural design.                                                                                                            |  |                                        |  |
| <b>Objectives:</b><br>The course aims to provide students with a solid foundation in the fundamentals of structural design, addressing the principles of reliability, the analysis of internal forces in typical frame structures, and the sizing of reinforced concrete, prestressed concrete and steel sections and members, up to the design and verification at the limit states of simple structural systems.<br>Alongside the theoretical lectures, particular emphasis is placed on applied activities, developed through complete design examples that guide students in interpreting real-world problems and translating theoretical concepts into practical design solutions. |  |                                        |  |
| <b>Propaedeuticities:</b> none                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                        |  |
| <b>Is a propaedeuticity for:</b> none                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                        |  |
| <b>Types of examinations and other tests:</b><br>Oral examination and project discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                        |  |