Nonlinear structural analysis of Historical Masonry Constructions by FE methods

Professor	Email	Institution
Pellegrini Daniele	daniele.pellegrini@isti.cnr.it	Institute of Information Science and Technologies "A. Faedo", ISTI-CNR, Pisa

General Information

This course introduces students to the numerical modeling of historic masonry structures. After a brief overview of the finite element method and modeling techniques, the constitutive equation for masonry-like (no-tension) materials will be explained. The course will then focus on using the finite element software NOSA-ITACA, covering its basic commands and applications to real-world case studies.

The lessons (in English) will be held both in person (at ISTI-CNR, Via G. Moruzzi 1, Pisa, Building B, Gate 19, 1st floor, Room C29) and online (link provided by the professor). **In-person attendance is highly recommended**, as course exercises will require the use of software provided by the professor.

Materials

Students should bring a laptop with Oracle VirtualBox installed and at least 30 GB of free disk space.

Schedule

Dates	Description
03/03/2026	h 14:00-16:00
06/03/2026	h 14:00-16:00
10/03/2026	h 14:00-16:00
13/03/2026	h 14:00-16:00
17/03/2026	h 14:00-16:00
20/03/2026	h 14:00-16:00
24/03/2026	h 14:00-16:00
27/03/2026	h 14:00-16:00
31/03/2026	h 14:00-16:00
	Total 18 Hours - 3 Credits

Other information

The final exam will be the discussion of an exercise assigned at the end of the course to the students consisting in a finite element analysis, performed by the NOSA-ITACA code, of a real case study.

For any information www.indicee.unifi.it - dott-dicea@unifi.it