

SAHC
Advanced Masters in Structural Analysis of Monuments and Historical
Constructions

Duration: 12 months

Course description:

The Advanced Master in Structural Analysis of Monuments and Historical Constructions (SAHC) is an education programme on the engineering of conservation of cultural heritage buildings, which encompasses the different sources of knowledge and experience required by the discipline. The Master combines the diversity of expertise at leading European universities and offers education oriented to a multi-disciplinary understanding of structural conservation through the involvement of experts from complementary fields, in a research oriented environment with close cooperation with the industry.

The Master Course has a duration of 60 ECTS (one academic year), using English as language of instruction. The size of the student population is 30, taking into account that two simultaneous coursework possibilities are offered in different locations. The number of lecturers is selected each year from a large pool of 30 international experts due to the adopted modular ratio. The study programme is composed of eight units, with six regular courses/units of 5 ECTS, one course project-based of 9 ECTS and one dissertation of 21 ECTS.

The regular courses are arranged as a mix of theory and application, in a context of a project-led education, where a project is effectively run for the full duration of the course. The subjects of the courses are: History of Construction and Conservation; Structural Analysis Techniques; Seismic Behaviour and Structural Dynamics; Inspection and diagnosis; Repairing and Strengthening Techniques; Restoration and Conservation of Materials. The Integrated Project course (9 ECTS) is carried out during the full first 26 weeks of the MSc. This truly project-based course includes a mini group project to solve a real engineering problem, with site visits, and the preparation of a proposal work plan for the dissertation. In addition, special lectures by leading international experts, practitioners or researchers, and seminars by the students are also part of the course. Finally, the Final Project/Dissertation (21 ECTS) is carried out and defended in the final part of the MSc. This aims at developing research and/or professional competences in the field of Conservation and Restoration of Architectural Heritage Structures. The dissertation is to be carried out inside the Universities with possible links to real case studies and /or private companies, authorities or other stakeholders.

The partners involved are University of Minho (PT), Czech Technical University (CZ), University of Padova (IT), Technical University of Catalonia (ES), and ITAM (CZ). Coursework is concentrated in two countries each year, on a rotating basis, and dissertation work is equally divided by all partners. The Masters degree awarded is a double degree from the institutions involved, together with a joint course diploma. A good quality degree in Civil Engineering with a minimum of 240 ECTS or equivalent qualifications is required for application.

Website: <http://www.msc-sahc.org>

Partners:

UNIVERSITY OF MINHO, Portugal (Co-ordinating institution)
CZECH TECHNICAL UNIVERSITY IN PRAGUE, Czech Republic
UNIVERSITY OF PADUA, Italy
POLYTECHNICAL UNIVERSITY OF CATALUNYA, Spain

Contact:

Prof. Paulo B. Lourenço
Department of Civil Engineering (DEC)
Azurém, null
PT - P-4800-058 Guimarães
Email: pbl@civil.uminho.pt

Maximum grant:

344 000 € (30 000 € consortium + 314 000 € scholarships), 2012
353 200 € (30 000 € consortium + 323 200 € scholarships), 2013