



WEEK DIDA RESEARCH

master ABITA

Master in Bioecological Architecture and Technological Innovation for the Environment. Build the present, design the future

According with EU policies on energy efficiency in buildings, Master ABITA 'Bioecological Architecture & Technology Innovation for the Environment', aims to promote green building design and architecture sustainability principles and methodology, providing students with innovative tools. The course trains building professionals, architects and engineers, in the use and development of competitive methods and solutions for lowering GHG emissions of the built environment in a life-cycle perspective, optimizing environment and energetic performance, and minimizing energy consumptions, considering the overall building design process. Throughout the two year duration of the MSc program, a practical approach is emphasized and students are continuously trained within interdisciplinary collaboration strategies for integrated design method implementation in their professional practices.

This program aims to provide specific high-level advanced post degree training, offering a students multidisciplinary educational background, with special focus on environmental sustainability and green building design. Sustainability concept is associated with high quality built environment transformations, from the macro-scale of urban planning, to the micro-scale of technical construction details. This method is oriented to a physical, social and technical approach, going over close specialized ones. International program involves also Workshops, Study trips, Summer schools and Internships.

Main objectives of Master ABITA are:

- improve architects and engineers awareness of green building strategies, fostering their competencies and skills on energy efficiency and environmental conscious design;
- acquire architectural solutions, experimenting technologies, procedures and tools to determine operational and performance modes of green building and renewables;
- training of new professionals on climatic and environmental control for use reduction of natural sources and energy consumption.

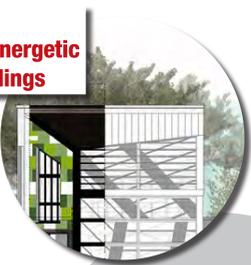
ENERGY MANAGEMENT COURSE-EGE

Master ABITA provides knowledge and skills required for professional energy manager qualification according to the standard UNI CEI 11339:2009 for industrial and civil sector. Students are involved in practical workshops on the use of tools and development of analytical methods, which are directly applied to a design studio project for case studies evaluation. Moreover students learn climate and microclimate analysis and fieldwork methods for measurement of environmental and energy parameters, thermal comfort surveys and post-occupancy evaluations. The EGE qualification allows students to achieve the highest level of competence in energy management. Course students proficiency will allow students to attend certification official exam qualifications according to EGE TUV e UNI EN ISO 50000.

BIM AND DESIGN BUILDER

Master ABITA provides theoretical introduction to systematic building energy performance simulation and analysis in relation to different climatic conditions. Typical building responses are analysed under particular climate types and explore the effectiveness of climate modifiers strategies, using predictive modelling techniques. Effects of solar gain, varying ventilation rates, surface finishes, daylighting, and occupancy are analysed to establish a range of effective design strategies. Students will undertake software workshops and design application of parametric massive design, dynamic thermal modelling and day-lighting. BIM's software will be tailored to the various design process stages and will range from climate data analysis to building form, day-lighting and thermal modeling, in order to maximizing the impact of shadows and solar control systems. These will be directly applied to design studio projects running in parallel to workshops. Project energy analysis will be run under Design Builder software.

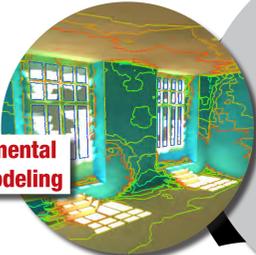
M1-Sustainable architecture and energetic renovation of buildings



M2-Design for Nearly Zero Energy Buildings



M3-Environmental energetic modeling



Master Structure Modules

ML-Vocational project work



M4-Build the future: buildings and smart cities



INTERUNIVERSITY CENTRE
ABITA



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