

Introduction to the School of Architectural Engineering

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Abstract One of the aims of the School of Architectural Engineering is to develop the consciousness of students regarding detailed design and environmental sustainability, together with a critical understanding about the practical viability of architectural “forms.” The hermeneutical foundation of the whole School program consists of overcoming the cultural dichotomy that was introduced in the building sector during the 19th century, as a consequence of the expansion of technique. Our ethical convincement is that “buildability” should be—in everyday practice as well as in monumental buildings—the epistemological and disciplinary foundation of “making architecture”.

From an ontological point of view, architectural shapes developed from primeval, essential functions tectonically expressed (supports in the form of trees, then becoming columns, spaced as much as stone architraves allowed; tympanums shaped as pitched roofs, etc.). In the same way, a student in the School of Architectural Engineering should immediately come to grips with the actual possibility of building the shapes surfacing from his imagination, but she/he is immature and inexperienced and then, sometimes, she/he proposes projects and solutions out of proportion, intemperate, or just anxiously imitative.

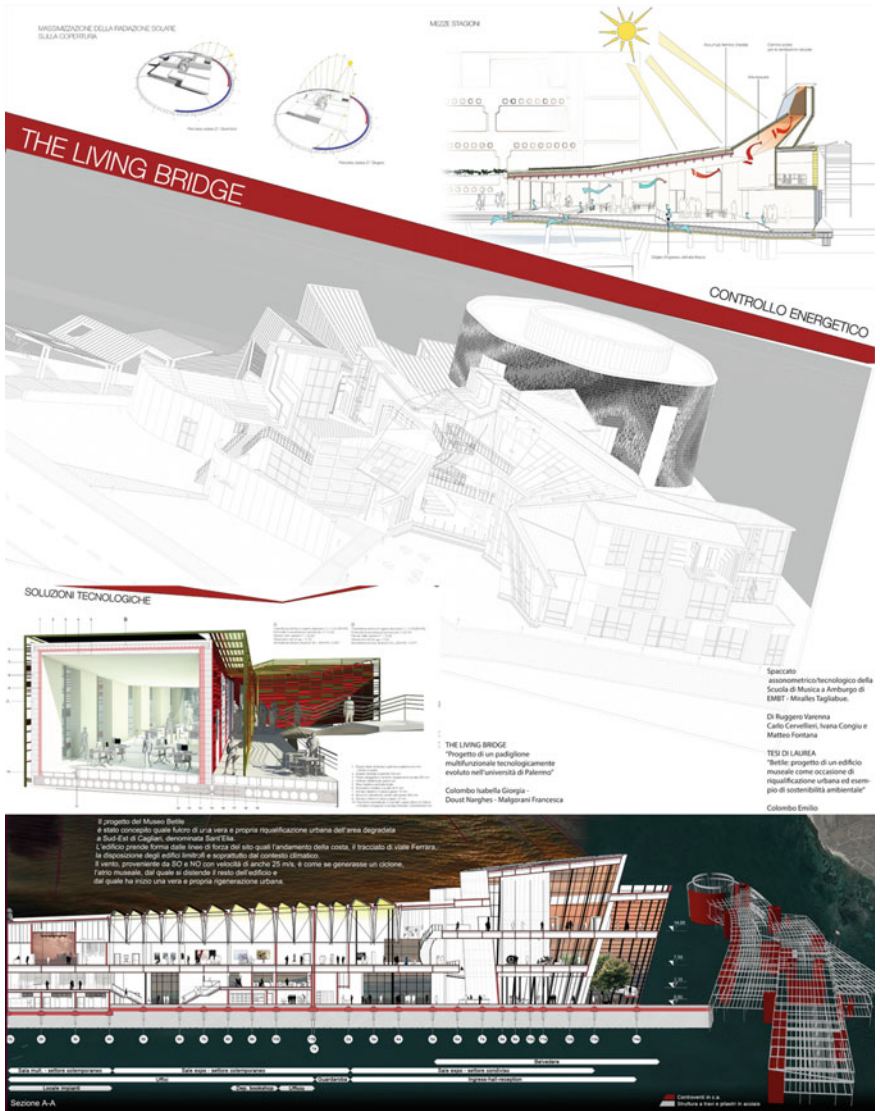
Thus, the qualification of Building Engineer—Architect for our graduates is appropriate and very precise, and is related to a process of cultural and organisational renovation of architecture itself—which needs to be constantly affirmed.

The point is that the role of general “director”, typical of designers, became very complex because of both the many disciplines involved and the management issues related to the design process. Our collective effort is then aimed at strengthening the directing role of the Building Engineer—Architect, who should be able to control

Authors mentioned in the poster: Carlo Cervellieri, Emilio Colombo, Isabella Giorgia Colombo, Ivana Congiu, Varenna Di Ruggero, Narghes Doust, Matteo Fontana, Francesca Malgorani.

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Poster Architectural Design: shape synthesis and construction

engineering issues before handing them over to specialists, but who at the same time should have a deep understanding of architectural synthesis.

It is thus of the utmost importance to introduce, at the very start of the design process, technical and morphological ingredients that, once incorporated in a “natural” behaviour of the designer, allow to develop a holistic approach with a good relationship among the many design variables. This explicit attention to complex technical issues requires both an immediate understanding of the problems and the successive engineering checks, and can potentially generate innovative architectural forms. Those who are still doubtful—maybe because they refuse to be influenced by supposed “environmental terrorists”—that sustainability should be organically and immediately introduced in the architectural development of a project are marked by a lack of culture that today can hardly be justified.

In this sense, the use of formal models of the more or less recent past, or the imitation of projects marked by purely formal and fashionable languages, does not coincide with the kind of didactic approach informing the School of Architectural Engineering. This is why one of the topics that got more attention from the very start of this programme was environmental consciousness: this is taught to students also with the help of our own research works, both national and international. Fulfilling these goals requires a synergic, interdisciplinary work during the 5 years of the programme.

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