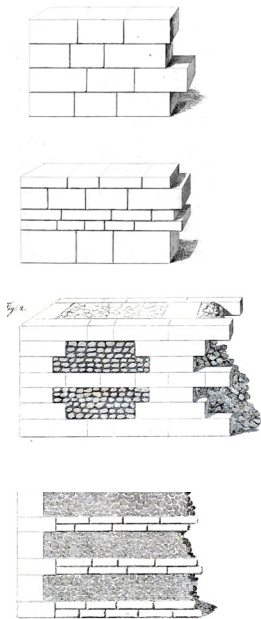




**Project Week: Heritage for a Sustainable Future -**  
**REBUS [REversible BUildings for Sustainable and temporary**  
**cities]**

**Step 1**

Classes will concentrate on principles of structural design as these had been conceived before and after the introduction of the mechanic of materials. This is to investigate the behaviour of solids subject to forces. This is also for providing students with a deeper understanding of the role of geometry in the evolution of construction techniques and their dimensioning rules over the Centuries.

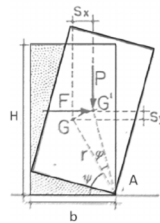


© G. Valadier, 1831-1832, Eleuterio Catesi, Giacomo Rocrué, e Accademia di San Luca. L'architettura Pratica Dettata Nella Scuola E Cattedra Dell'insigne Accademia Di S. Luca. Roma: Società Tipografica. Tom. III

**Step 2**

Basics on the theory of equilibrium as a tool for understanding the design of stone masonry and to assess its safety level with respect to exceptional actions will be taught by means of practical case studies. A great deal of attention will be paid to the use of graphic statics methods of analysis so to assess the stability of masonry constructions. Students will be equipped with a knowledge of the most common mechanisms of collapse that can affect these building systems. This goes together with the design of the most suitable interlocking masonry pattern. Students are asked to design their own .

**A student competition** will be held by December, the 20th. The winning design will be the one built in January at the 1:1 TUM workshop



© Giuffè A. (1991) Lettura sulla Meccanica delle Murature Storiche. Edizioni Kappa.

**Step 3**  
**Students will build up in a scale 1:1 a studio**  
**made out of dry-joint masonry**

**Workshop: 13- 17 January 2025**  
**1:1 Design Factory**

„The strength of a wall, it is dependent from solid footings and high-quality materials. However, this also depends from the way in which these materials are set. In fact, it is not unusual to build weak constructions with stable footings and high-quality materials because of ignorance (lack of knowledge) and negligence upon the setting of construction components.“

Milizia, F. (1785) *Principi di Architettura Civile*. Tomo III. Bassano: a spese Remondini di Venezia

*Original Text: « La forza de' muri dipende non solo da' solidi fondamenti, e dagli scelti materiali, ma anco dalla materia d'impiegare essi materiali. Non è già raro, che con fermi fondamenti, e con materiali ottimi si facciano fabbriche debolissime per ignoranza o per trascuratezza nella disposizione.»*