

# MEGA

Architecture - Building Technology - Civil Engineering - Management

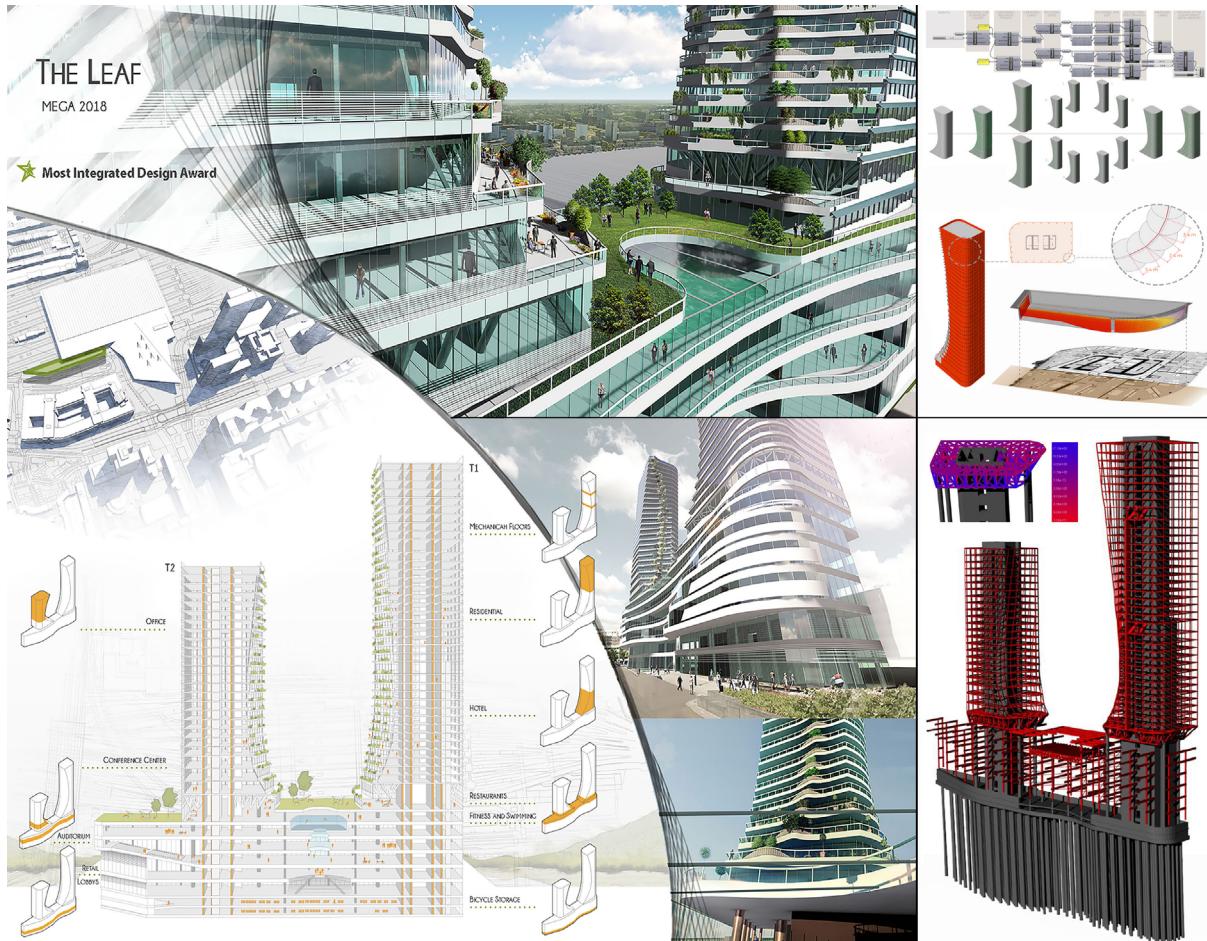


image credits - MEGA 2018 - STUDENTS TEAM: Cristina Maria Marginean, Francisco Guzman, Despoina Pouniou, Ivneet Bhatia, Jacco Verhage, Jordy Bouts, Fatima El Hadji

#### Course Coordinator

Michela Turrin - Design Informatics  
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#### Responsible Professor

Mauro Overend - Structural Design

Disciplines: Architectural Design; Climate Design; Design Informatics; Façade Design; Structural Design; Management. Each discipline has its own tutors. Each student works on one discipline and is tutored by the tutors of that discipline.

Code	AR0139
Credits	15 ECTS
Excursion	One day site visit

\*Only for MSc2 projects

Project type Multidisciplinary

Approved Master 2 Yes  
Architecture design  
project

MEGA is a collaborative integral multidisciplinary design of a special large and/or tall building. This could be a multifunctional skyscraper or large span building, such as a stadium or an airport.

Students work in teams of 5-7. The team is responsible to deliver an integrated design as a multidisciplinary team. Each student in the team is responsible for one discipline. Disciplines are: architectural design, climate design, façade design, design informatics, structural design, management. Sustainability runs across all disciplines.

The design process occurs in a digital design environment, supporting the workflow across disciplines. The collaborative digital design requires a 3D approach with BIM methods, parametric design, simulations/performance analysis and computational optimization.

The process starts from conceptual design and reaches details at 1:5. The integrated design is presented by

each team at the final presentations, with a jury of TU Delft tutors and external invitees. The detailed work of each discipline (including climate simulations and installations; structural details and calculations; façade details; computational workflow and optimization data; etc.) is delivered in individual in-depth reports.

The process is realistic and matches the design process of large international projects in competition phase; it lets students acquire experience for professional careers as specialists.

The course is supported also by design/engineering firms. As recent examples, support was given by Arup, UNStudio, ABT, Neutelings Riedijk Architecten. Nathalie de Vries was recently involved. Firms like Techniplan, Deerns, DGMR, Esteco, and others consulted the students on specialized disciplines, with a perspective from practice. Examples of past collaborations include also Dutch Municipalities and Provinces.

Spring semester 2021