Course Objective
This workshop will focus on the fundamentals of parametric design within the conceptual design environment using Grasshopper (Generative plug-in used in Rhinoceros). The objective of this workshop is to provide participants with both the conceptual and technical framework through which they can better understand the relevance of parametric design to the various design stages in architectural practice.

Participants
Architectural students & professional architects.

Prerequisite
General understanding of 3d design software.

Learning Outcomes
- Understand the basic principles of parametric design.
- Learn how to read, compose, edit, and generate algorithmic definitions using Grasshopper.
- Prepare definitions that reflect the students’ own design criteria in the development of their design project.

Course Contents
- Introduction to the basics and advantages of parametric design.
- Introduction to software interface of Rhinoceros, Grasshopper and general logic behind algorithms.
- Explanation of Grasshopper components, connections, essential mathematical functions and logical operations.
- Exploration of concepts such as object attributes/parameters, data types, data structures and algorithms composition.
- Geometry generation from data streams.
- Base exercises (Attractor field, Surface subdivision, Morphing)
- Incorporating attractor fields to derive responsive differentiation in the architectural skin.
- Paneling and the formation of grids, and patterns.
- A final one-day project will be designed within the workshop.

Course Duration
5 days.