

Program Training 01

_day 1 (friday) 10.30 - 18.00

10.30 - 11.00: Introductory Lecture + Workshop Theme presentation

11.00 - 13.00: First Grasshopper Training Session: Basics

Topics covered:

- + Linking geometry from rhino in grasshopper, data types (points, curves, numbers (integers, doubles/floats), domains, surfaces, breps);
- + lists and trees: list operations, culling, function component;
- + making/removing connections (use additions/subtractions as examples); cross reference, longest list, shortest list examples;
- + logical operations;
- + scalar components;

15 min Coffee Break

- + vectors and points operations
- + XForm operation - Move, Rotate, Scale
- + introduction to curves (?)
- +panels, parameter viewers, sliders and sliders settings, multidimensional sliders, etc.

13.00 - 14.00: Practical Application 1

Visualize mathematical functions in 3d/2d using series/range components, function components (and/or trig functions).

Implement and use geometry controls: numeric (sliders) + geometric (distance between two points, angle etc.).

14.00 - 14.30: Lecture 1: Parametric Design

14.30 - 15.30: Lunch break

15.30 - 17.00: Second Grasshopper Training Session

Topics covered:

- + curves: analysis, generation, offsetting, filleting, projecting to surfaces
- + surfaces: analysis, generation (loft, extrusion, point surface), primitives, dividing
- + orienting geometry to a surface
- + attractors (grid, surface)

17.00 - 18.00: Practical Application 2

Possible themes: create a surface and then populate it with any kind of geometry they want - circles, cylinders, boxes which are then dynamically modified (attractors/curvature values/height/etc.).

Students are asked to send in images and documenting their work.

18.00 - 20.00+

Team creation:

Everybody is asked to complete a form with their (self-assessed) experience in Rhino and grasshopper. No cheating!

Each team should have at least one person that is experienced in Grasshopper and/or Rhino.

Directed work session.

_day 2 (saturday) 10.30 - 20.00

10.30 - 11.00: Group meeting + review on past activity

11.00 - 13.00: Third Grasshopper Training Session

Topics covered:

- + paneling and advanced surface subdivision
- + triangulation
- + four point non-planar surfaces
- + four point planar! surfaces and deviations
- + diagrid
- + hexagonal paneling

15min Coffee Break

- + box morphing components as well

13.00 - 14.00: Practical Application 3

Create a surface and play with the techniques learned previously.

14.00 - 14.30: Lecture 2 (fabrication techniques and strategies)

14.30 - 15.30: Lunch break

15.30 - 16.30: Orienting geometry + basic unrolling + paper prototypes (manual cuts)

16.30 - 18.30: Teams work on a short description of their project which they will present and discuss with the tutors.

18.30 - 20.00+ Directed work session: discussions and work

_day 3 (sunday) 10.30 - 20.00

10.30 - 14.30: Directed work session

Students are encouraged to finalize their projects and to start preparing their files for the laser cutter.

12.15 - 12.30: Coffee Break

14.30 - 15.30: Lunch break

15.30 - 20.00+ Fabrication! Laser cutting madness.

Students are required to laser cut their files and to start assembling their final prototypes.

_day 4 (monday)

10.30 - 12.30: Board printing and last-minute prototype adjustments

13.00+ - EXHIBITION