ARCH, LARCH and GD 497 (Special Topics)

Computer Programming for Artists and Designers

FALL semester 2019

Prerequisites: high-school mathematics
Tuesday 6:00 – 9:00 pm
at 144 Stuckeman Builiding (computer labs)
Instructor: Mina Rahimian // e-mail: mxr446@psu.edu

Course Description
The course introduces the fundamentals of computer programming in the creative fields of arts and architecture, leading to the idea of generative design systems. The main objective is to teach students how to explore the potential of computational tools to solve specific problems, while unleashing their creative power.

The basic constructs of programming are taught using textual programming languages, linked to CAD platforms. In parallel, the course will present various paradigms for knowledge representation and computation with forms. Topics covered include parametric design, procedural modeling, rule-based design, and other paradigms borrowed from computer science.

The practical part of the course includes a series of biweekly exercises in which the introduced constructs are applied, as well as a capstone project that uses the knowledge acquired throughout the course to create a tool to solve a design problem. The capstone project may address different design scales, from landscape architecture to product and graphic design.