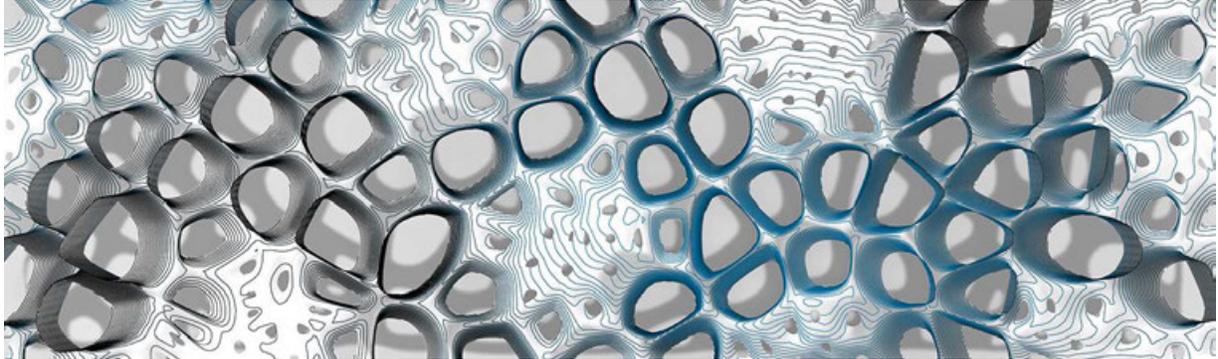


# Media for Design Development: Topo Architectures

## ARCH 423/523 – Spring Term 2020 Syllabus



### SCHEDULE:

Class meets on Wednesday and Fridays from 10:00- 11:50 AM, LA 383

### INSTRUCTORS:

Mary Polites                      mpolites@uoregon.edu  
Ignacio Lopez Buson              ilopez@mapsmethods.com

### COURSE DESCRIPTION:

#### Introduction

For the entirety of the 20<sup>th</sup> century, the fields of architecture and landscape architecture have developed as detached disciplines despite its obvious adjacency. Today, in an age of environmental crisis, we are obliged to rethink how both the natural and built environment are designed. If we want to start facing the challenges of climate change, landscape and architecture need to be understood as intrinsic parts of a holistic system that merges environmental, social and economic logics.

In such a challenging scenario, digital technologies have proved to be a critical means to achieve efficiency (a 20th century paradigm) and to articulate complexity (a 21st century paradigm). The use of computational tools in the architectural industry is already establishing the foundations for a new design model where functionality, beauty and ecological responsibility are not mutually exclusive.

**This course aims to blur the boundaries between the urban and the natural, and explore the potential of digital tools and techniques in the conceptualization, development, visualization and fabrication of innovative architecture-landscape hybrids.**

#### Methods

The course will be structured in **three main phases**: a short initial **tooling-up phase** that will introduce the students to all the necessary software and tools (rhino, grasshopper, indesign). A second phase will focus on **digital analysis, simulations and design processes** to create an architectural/landscape environment. Finally, a production phase will develop **techniques to document and fabricate the proposal**. Whereas the first phase will be conducted individually, the following phases will be developed in groups of 2-3 people to alleviate the workload and encourage collaboration. Each group will pick a natural location anywhere in the world and develop a **200'x200' site** focusing on the most characteristic **environmental parameter** (sun, wind, water...) to that area. Through GIS techniques, simulations, modeling and analysis tools, the group will explore different spatial configurations that address the environmental input while incorporating architecture program. After selection of an outcome, students will proceed with its technical documentation and a digital fabrication process to generate a high quality model. A **printed documentation booklet** and the **physical model** will be the outcomes of this course.

### HARDWARE & SOFTWARE REQUIREMENTS:

PC or Mac with MS Windows (**Mac users must have bootcamp installed and working before the first day!**)

1. Rhino 6.0 (*Rhino for Mac will not work for tutorials – must be Rhino for Windows*)
2. Grasshopper 3D (included in Rhino 6.0)
3. Adobe InDesign