

Arch 587- A Theory of Design Computing

The course explores the relationship between theories of design and computational tools. Explores how the emergence of computing as a mainstream tool in design is changing architectural practice. Discusses how, as with other technologies that have revolutionized the practice of architecture, information technologies carry hidden implications about design process and products. The course also includes an introduction into basic computational methods via the Python programming language and the Rhinoceros CAD environment.

The course will be divided into two parts: a lecture/seminar on Tuesdays and a coding workshop session on Thursdays. Tuesdays will be used for a short lecture by the instructor and/or a discussion by all the class. Thursdays will be devoted to the instruction of basic computational concepts in Python and Rhinoceros. A Rhinoceros license will be provided to you for use in your own computers for the duration of the course. No prior knowledge in programming is required. A laptop computer for use in class is ideal, but the course can equally be taken with the use of lab computers as well.

Technical competence includes a deep conceptual understanding of the interplay between design and computational methods. In this course students will:

- Understand the broad brushstrokes of thought at the intersection of the built environment, computing and design, becoming acquainted with the important authors, ideas, and projects that have contributed the most to bringing us to the current time and place.
- Take ownership of the vocabulary of ideas and concepts necessary to participate in the larger worldwide discussion of design computing and to see what current topics are being talked about.
- Start to learn basic coding skills in the realm of architectural design using Python and Rhinoceros as key drivers.

