

CERTIFICATE IN COMPUTATIONAL DESIGN

The Certificate in Computational Design prepares students to develop a skill set in computer-aided design and fabrication, built upon an integrated application of design research, architectural geometry, digital theory, and digital design technologies in contemporary architectural practice and research. In addition to addressing computational proficiency, which has become important to the practice of architecture, the certificate also focuses on intellectual concepts that are relevant to the discourse of architectural practice.

CURRICULUM (12 Credits)

The prerequisite courses in Media and Modeling introduce intermediate and advanced approaches to two and three dimensional modeling and representation in architecture, using both manual and digital media and techniques. Students pursuing the Certificate in Computational Design take courses in advanced topics of computational design theories and methods.

This certificate is currently available to Architecture majors only.

2 Prerequisite Courses:

ARCH 2472, Media and Modeling II

ARCH 2474, Media and Modeling III

4 Courses from list below (12 credits required):

ARCH 4010, Architectonics

ARCH 4503, BIM Applications

ARCH 4505, Geometric Constructs

ARCH 4507, Parametric Design

ARCH 4508, Shape Grammars

ARCH 4533, Parametric Modeling with BIM

ARCH 4701, Analogue-Digital Design Computation

ARCH 4702, Design Scripting

ARCH 4803, Embodiment + Digital Realm

NOTE: Students must earn a grade of "C" or higher in courses used to satisfy the requirements of the certificate. Courses used to satisfy the certificate requirements may be used to fulfill free electives required by the Institute, as well as Architecture electives for Architecture majors.