Illinois Institute of Technology
College of Architecture
ARCH 497: Digital Design and Fabrication

Please See - http://www.iit.edu/~mcleish/arch497_DDF/

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Course Time:  Wednesday, 6:25-9:05

Course Description: This course explores the design and fabrication of architectural components in contemporary practice. We will investigate through the design and prototyping of a custom architectural component.

2. Behavioral models of building structures using Structural analysis tools
3. Use of CAD tools to model building components for production.
4. Use of CAD tools to analyse structural properties of components.
5. Material properties and related fabrication constraints.
6. Current fabrication processes
7. Use of IIT owned CNC tools to fabricate architectural components
8. Rapid prototyping

Course Objectives: The primary objective for this course is to expose students to new technologies used in architectural practice and component design and fabrication - such that they can include them within their architectural palette and have a meaningful dialogue with those construction team members who specialize in these trades.

Students successfully completing this course will demonstrate the following:
• An understanding of the broader implications of digital design and fabrication on architectural practice.
• An understanding of a variety of architectural materials and their use in digital fabrication.
• The ability to use 3D modeling tools to design, analyze, and fabricate an architectural component.
• The ability to prepare and transfer data between various modeling and fabrication tools.

Students will be required to write a research paper on a relevant topic, fabricate design studies of an architectural component, and produce a full-scale working prototype of a final design solution.

Students should be comfortable navigating a 3D digital environment and have some experience with 3D modeling.