Arch497: Digital Design and Fabrication

Instructors: Thomas J McLeish
            Chris Palmer

Course Time: Wednesday, 6:25-9:05
Course Location: SH-236

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.

To achieve this objective we will explore the design and fabrication of architectural components in contemporary practice. Specifically through the design and prototyping of a custom architectural component, in the process addressing:

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. Rapid prototyping
8. Use of CNC tools to fabricate architectural components