

Architecture 4301/5301

**Materials + Assembly Principles**

School of Architecture UNC Charlotte - Fall 2018

Hours: M W F 10:10 - 11:00 a.m. (3 credits) Storrs 290

Instructor: Greg Snyder ([gsnyder@uncc.edu](mailto:gsnyder@uncc.edu))

*Nevertheless we may assert that the built is first and foremost a construction and only later an abstract discourse based on surface, volume, and plan, to cite the "Three Reminders to Architects" in Le Corbusier's *Vers une architecture* of 1923. One may also add that building, unlike fine art, is as much about an everyday experience as it is a representation, and that the built is a thing rather than a sign, ...*

Kenneth Frampton, from Studies in Tectonic Culture

**Premise**

The World is physical. However ideal our architectural concepts might be, if they become buildings they are ultimately manifest through materials in an act of construction. An architect should take great delight in this reality. This course examines materials and construction in service of a critical understanding of the relationship between material, architectural concepts, building construction, and the experience of the built environment in a cultured society.

**Objective**

Architecture 4301/5301 is the first course in the Building Science sequence, and should be conceptualized as a foundational course to be built upon through both studio practice and subsequent Building Science coursework.

The objectives for this course include the following:

- To understand principles of materials and assembly in the context of building design and construction;
- To understand the development of material and construction strategies as integral to the conceptualization process of a building design;
- To develop an understanding and conversancy with the contemporary discourse on materials and construction in the broader context of the history of building and material culture;
- To understand the role that material and technological development of building materials has in the context of sustainability and performance;
- To develop a sense of delight, wonderment, and empowerment through the deeper understanding of materials and construction.

This course will introduce the following criteria for professional architectural programs as required by the NAAB:

B.4: Technical Documentation

B.7: Building Envelope Systems and Assemblies

B.8: Building Materials and Assemblies

**Method**

The content of the course will be examined through lectures, readings, representation and building component analysis, and the drawing and modeling of building assemblies, wall sections and details. There will be quizzes and two examinations to test the students' retention of the content and their ability to synthesize it with design thinking.

**Content**

The course is organized around the materials of wood, masonry, steel, concrete, and glass, and will examine the nature and use of these materials through the lenses of historical, cultural, and technological developments. In addition to the properties and characteristics of materials, the course will examine methods and processes of construction and assembly, and put these in the context of contemporary professional design practices.