

**Course Overview**

We examine structural types, structural behavior, material behavior, and construction constraints that underlie our design of buildings, emphasizing the need for a designer to envision a complete 3-D structure. We mostly build “orthogonal structure” constructed in horizontal and vertical planes, requiring high-strength modern materials such as steel or reinforced concrete, comprising roughly 75-80% of the course. This is complemented by “geometric structure” where the three-dimensional shape dictates function; prominent examples include membranes, cable nets, historic masonry domes, and shells. Geometric structure is characterized by “form-finding.” Statics underlies all topics, and our treatment is consistent with NCARB expectations.



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