Arch 576 FPD: Theory of Function, Programming, & Space Organization
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Description: An advanced course on Mathematical Theory of Function, Programming, and Space Organization as the basis of the design that can best facilitate accomplishment of the Institutional Mission and Function of the client. The specific topics include: Logics of Design; Design Teleology; Mathematical Theory of Function, Space Programming, and Space Organization. To facilitate successful assimilation of the theoretical knowledge and their application while learning the specific function and requirements for the building types of interest, semester-long studies on exemplary building programs and the conceptual designs of the selected building types are also studied in parallel. Prerequisite: Graduate standing in Architecture.

Objective: To foster intellectual rigor and professional competency in Building Programming and Design through acquisition of cutting edge knowledge in Formal Theory of Function, Building Programming and Space Organization, and further expanding its frontiers to open up new possibilities for design in the era of “Intelligent Machines.”

Strategy: The pedagogic strategies are three fold: 1) Lectures on Mathematical Theories of Function, Programming and Space Organization; 2) Creative Research for advancement of the theories and their applications; and 3) Research on Functionality, Program Requirements and Design through the CASE Studies on Programming and Design of the projects of the selected building types.

Prerequisite: Graduate standing or consent of the instructor.

Class Meetings: Lecture: Wed 9:00 – 10:50 AM, Room 17 TBH
Discussion: To be arranged

Credit Units: 3 Graduate Hours

Grading Bases: Comprehension of the Course Topics. 40%
Contribution to further advancement of research on the topics 20%
CASE Study on Functionality, Building Program, and Design 40%
Class Activity: ±10% max
Within-Group Adjustment: ±10% max

Term Project: Research on Functionality, Programming Requirements, and Design through CASE Study of an exemplary project of a selected building type, including: 1) teleological prescription of the project; 2) formal description of the function and necessary/desired characteristics of the requisite functional units; and 3) the inter-functional-unit relationships and the spatial organizational response to best facilitate the accomplishment of the Institutional Mission of the client. For this study, exemplary program documents of selected building types of interest will be provided.