Japan Studies Institute Project Summary

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Course 1: Japanese Wood Architecture: From Traditional to Contemporary
Architectural Design 2.1 – ARC 2303
Second –year Architectural Design Course

The purpose of this course is to introduce Japanese traditional wooden architecture to students through the study of a series of vernacular structures such as tea houses, houses, pagodas, bridges and temples. Following a case study of existing buildings, students will develop an understanding of the underlying principles of traditional Japanese architecture as well as esthetic and design philosophy. They will then use their recently acquired knowledge to determine a strategy with regards to materials, building orientation, structural system, composition, scale and proportion, relation to context and sustainability in order to design a traditional Japanese house on a specific site in Japan. Students will be assigned sites in different geographic and climatic areas of Japan to make them aware of contextual and environmental challenges. For example a site might be located in a northeast mountain area while another may be in a southwest city. The third part of the course will consist in designing a Japanese community center in Florida using design principles previously learned. Students will pay particular attention to material sourcing and use as well as developing a contemporary structural wood system inspired of the Japanese post and lintel system.

Part 1: Case Study of Traditional Japanese Wood Architecture
Study of such structures as tea houses, houses, pagodas, bridges and temples. Each student will present their precedents' study to the class.

Part 2: Design a Traditional Wooden House in Japan
Students will be given 3 different sites (Okinawa, northeast mountains and southwest coast) and will be asked to address material sourcing and use, structural system, composition in plan and elevation and response to climatic conditions and sustainability.

Part 3: Design a Japanese Inspired Community Center in Florida
Students will be given a specific site in North Florida and will have to use primarily locally source materials such as cypress wood. They will also have to develop a contemporary wood post and beam system inspired from traditional Japanese wood structures. The community center will also include a theater for traditional kabuki and Noh plays.

Course 2: Furniture Design and Making Class
Elective Course – ARC 4293
Third –year Elective

Based on the work of Japanese furniture designers and artists George Nakashima and Isamu Nogushi, students will be asked to design a piece of furniture of their choice, which embodies principles of Japanese design. In order to produce a thoughtful and appropriate solution to this project, students will be exposed to principles of Japanese philosophy and esthetic and to the concepts of Wabi Sabi. Ideas such as imperfection, roughness, asymmetry, simplicity, economy and impermanence will be emphasized as important design drivers. A specific attention will be given to the choice of materials, their treatment and the way in which they are assembled. Materials can be processed and finished while still expressing the nature where they came from. At the basis of their design, students will be asked to identify a structural system and appropriate materials associated with such a system. That system will be researched within Japanese traditional wood architecture including such structures as bridges. Following the definition of an appropriate structure for their design, students will focus on connecting the various components of their design. Based on Japanese joinery they will be asked to develop connection details that do not use nails or screws.
The success of their design will be evaluated as much on the quality of the structure as well as the quality of the connections, details and craftsmanship.

<u>Part 1: Lectures on Japanese Philosophy and Esthetic</u>
Students will make presentations to the class to demonstrate understanding

<u>Part 2: Develop an Appropriate Structural System</u>
Based on structural concepts such as post and lintel, pre-tensionned beams and long-span bridges, students will identify a structural system adapted for their furniture design.

<u>Part 3: Define Connection Systems between the Structural Components</u>
Students will refine materials selection as well as joints between vertical and horizontal components (legs/ground and legs/seat or legs/table top).