

ARCH5131C TOPICAL STUDIES IN DESIGN THEORY
CONDITION/COMMUNITY: Design + Make a Learning Center
2017-18, 1st Term

Instructor: Peter W. Ferretto
Office: 405 T: 98531535 E: peter.ferretto@gmail.com

Online course TBC
Student Assistant TBC

1.0_DESCRIPTION

Every human being is an artist, a freedom being, called to participate in transforming and reshaping the conditions, thinking and structures that shape and inform our lives.

Joseph Beuys

This elective course focuses on the design of a small Learning Centre for the Sisters of the Precious Blood Community in the New Territories, Hong Kong. Students will develop a design for a 200m² education facility in a vacant plot adjacent to the Sister's complex.

Architecture is fundamentally connected to building. Students seldom, during the course of their studies, design projects that get built; however when confronted with the realities of construction, the architect is challenged with issues that go beyond aesthetics and functionality. Faced with the prospect of building, a new set of parameters enter the equation: considerations relating to feasibility, phasing, access, availability, cost, contingencies and most importantly collaboration play a crucial role in the implementation of a design.

Team work is an essential part of the architectural process, during this course students will collaboratively prepare a construction documentation set for a small educational building. The new Learning Centre will be a sustainable building where young girls can learn and gain knowledge about ecological and social issues. It is part of a masterplan for a bigger site accommodating a residential block, a spiritual garden and an urban farm.

The centre will include:

1. Female and male toilets – with septic tanks
2. Kitchen – for cooking lessons and food preparation
3. Market area – for display and selling products from the urban farm
4. Hall – lecture room, projection screen, flexible space and a small staff office

Students will have to consider:

1. Cost - the building will be built for a moderate budget
2. Materials – sustainable, lightweight, economical
3. Environment – light, ventilation, rain, drainage
4. Services – electricity and water supply
5. Coordination – with professional engineers

Methodology

Students will be working in teams of 3, following a 4 steps:

Step 1_Research (3 weeks)

- Site Survey
- Precedent studies: Traditional and contemporary
- Materials analysis: Standard and non-standard
- Cost

- Programme
- Environmental

Step 2_Concept Design (3 weeks)

- Form
- Roof
- Façade
- Programme
- Structure
- Presentation

Step 3_Design Development (3 weeks)

- Design completion
- Constructability
- Details
- Compliance with building codes
- Materials
- Drawing set (Plans/Sections/Elevations)

Step 4_Construction Documentation

- Set of construction drawings
- Final model
- Final visualizations
- Technical report
- Cost report
- Final presentation

2.0_OBJECTIVES

The objectives of the course are to develop a team design for a new Learning Center, from initial concept to construction documentation. Students will:

- Understand the relationship between design and construction
- Work in a team
- Process input from consultants: Structural, Services and Landscape
- Face the challenges of working with a real client
- Adapt their design to real cost issues
- Experiment design solutions
- Produce a set of working drawings
- Visualize their design

3.0_LEARNING OUTCOME

By the end of this the semester, it is intended that students develop the following skills and capacities:

- Explore basic spatial and material design concepts for a small building
- Apply analysis and critical judgement and utilise speculation, iteration and reflection in the creation of a design solution
- Resolve design proposals to allow for accurate technical documentation
- Acquire basic knowledge of technical areas related to preparing a construction documentation set
- Resolve at a professional level architectural propositions of substantial complexity
- Develop confidence with graphic and verbal communication and presentation skills
- Produce technical documentation enabling the realisation in built form of a modest architectural proposal

4.0_ASSESSMENT SCHEME

The class instructor will monitor and evaluate each student's progress and performance over the course of the semester. At the end of the semester the instructor will review each student's final performance and the evaluation and grading of the class will be structured as follows:

Final Presentation: 50%

- Each team member will be assessed on their role in generating the final design
- Their ability to integrate within the team
- Their capacity to adapt design solutions to meet constructability
- Aptitude to communicate design intentions

Process: 50%

- Process is a key component of this course. How the team arrive at the solution is as important as the final design.
- Students should attend all classes, any absence should be warned and accompanied by a medical note if recurring.
- Students are asked to participate in discussions and engage in developing different view on the subject.

5.0_COURSE FORMAT

- We meet once a week
- Attendance is obligatory
- There will be a site visit
- Midterm review at CUHK where the client will attend
- Final Presentation in December

6.0_REQUIRED READINGS

Abraham, A. (2015). *A New Nature: 9 Architectural Conditions Between Liquid and Solid*. Zurich: Lars Muller Publications.

Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A Pattern Language: Towns, Buildings, Construction*. Oxford: Oxford University Press.

Bolchover, J., & Lin, J. (2014). *Rural Urban Framework: Transforming the Chinese Countryside*. Basel: Birkhäuser.

Price, C. (2012, 01 31). *Cedric Price: Magnet*. Retrieved from Architectural Foundation:
<http://www.architecturefoundation.org.uk/programme/1997/magnet-cedric-price>

Rudofsky, B. (1964). *Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture*. New York: Doubleday & Company.

Sheil, B. (2012). *Manufacturing the Bespoke: Making and Prototyping Architecture*. London: Wiley.

Till, J. (2013). *Architecture Adapts*. Cambridge, Massachusetts, United States: Massachusetts Institute of Technology.

7.0_FURTHER READING

An essential book of this class is "Studio Craft & Technique for Architecture" (Delaney & Gorman, 2015). **All students should purchase this book.**

The structure of the book is critical for the structure of the course:

1. Getting started in Architecture
2. Principles of Representation
3. Drawings Techniques
4. Working through Drawing
5. Surveying
6. Materials
7. Structure
8. Principles of Construction

8.0_FIELD TRIP

We will visit the site in early September 2017.

9.0_SCHEDULE

NO.	DATE	TASK	COMMENT
	17.09.05	Start of Semester	Class Postponed
1	17.09.12	Step 1_ Research	
2	17.09.19		Site Visit
3	17.09.26		
4	17.10.03	Step 2_ Concept Design	
5	17.10.10		
6	17.10.17		Mid-Review
7	17.10.24	Step 3_ Design Development	
8	17.10.31		
9	17.11.07		
10	17.11.14	Step 4_ Construction Documentation	
11	17.11.21		
12	17.11.28		
13	17.12.05	Class Cancelled	Final Reviews
14	17.12.12	Class Cancelled	Final Reviews
15	17.12.16	Final Review	Sister's Complex

IMPORTANT NOTE TO STUDENTS:

Attendance:

Class attendance is required in all courses. For an excused absence, the instructor must be notified and presented with documentation of illness or personal matter. Please note: Three (3) or more unexcused absences may result in a failing grade for the course.

Academic Honesty:

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at: <http://www.cuhk.edu.hk/policy/academichonesty/>. With each assignment, students may be required to submit a statement that they are aware of these policies, regulations, guidelines and procedures.