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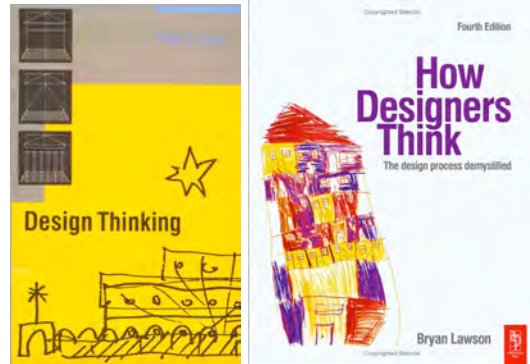
Arguably, the most important thing a student will take from their architectural education, is the toolbox allowing them to think, critique, communicate, and make architecture. In other words, a battery of design methods and processes. Hence, much effort is devoted in studios and other classes to teach such tactics and strategies.

Yet, very little attention goes to cultivate the skills necessary to develop students' awareness and skills to be critical regarding what/why/when/how to use such methods. Favoring production over introspection generates a blind and uncritical attitude towards one's own ways of thinking, sensing, feeling, and doing. Its negative impacts are clear: how are we to learn from the past, improve our procedures, or be fully responsible for what we design if we don't really know how to evaluate our own design process and methods?! And, how are we going to grow as architects if we don't know how to be aware of our own approach, thinking, decision making? When was the last time you really looked into your own design process and method systematically?

The goal of this graduate course is to bring the necessary attention, knowledge, and understanding to cultivate students' awareness and skills to (reflectively) recognize what/why/when/how to use a particular approach, method and process. In order to accomplish such objective, this class investigates *architectural design processes and methods* through comparative analyses, both theoretically and practically. The overall premise is that every design process occurs within a general methodology that (pre)determines its ideology, universe and mode of inquiry (i.e., questions, strategies and tactics), knowledge base, representation, goals, expectations, and results.

During the first part of the semester, the focus is in understanding the fundamental nature of the design process whereas the second (and longer) part is devoted to study a variety of architectural design methods. In addition to readings and lectures geared to establish a conceptual framework, the course uses short, hands-on assignments and case-studies. Diverse methods and their functional fit to an architectural task will be discussed and students asked to reflect on their own knowledge/use of them. A final project consisting in the critical revisiting of a student's past design processes is employed to summarize the insights collected throughout the semester.

The great ambition of the class is to provide students with a way to recognize not only the best strategy and tactic for a job but, vastly more importantly, what kind of approach and method they feel most at home with. The design process would thus be turned on itself: it would become a magic mirror on which the student may begin to know himself.



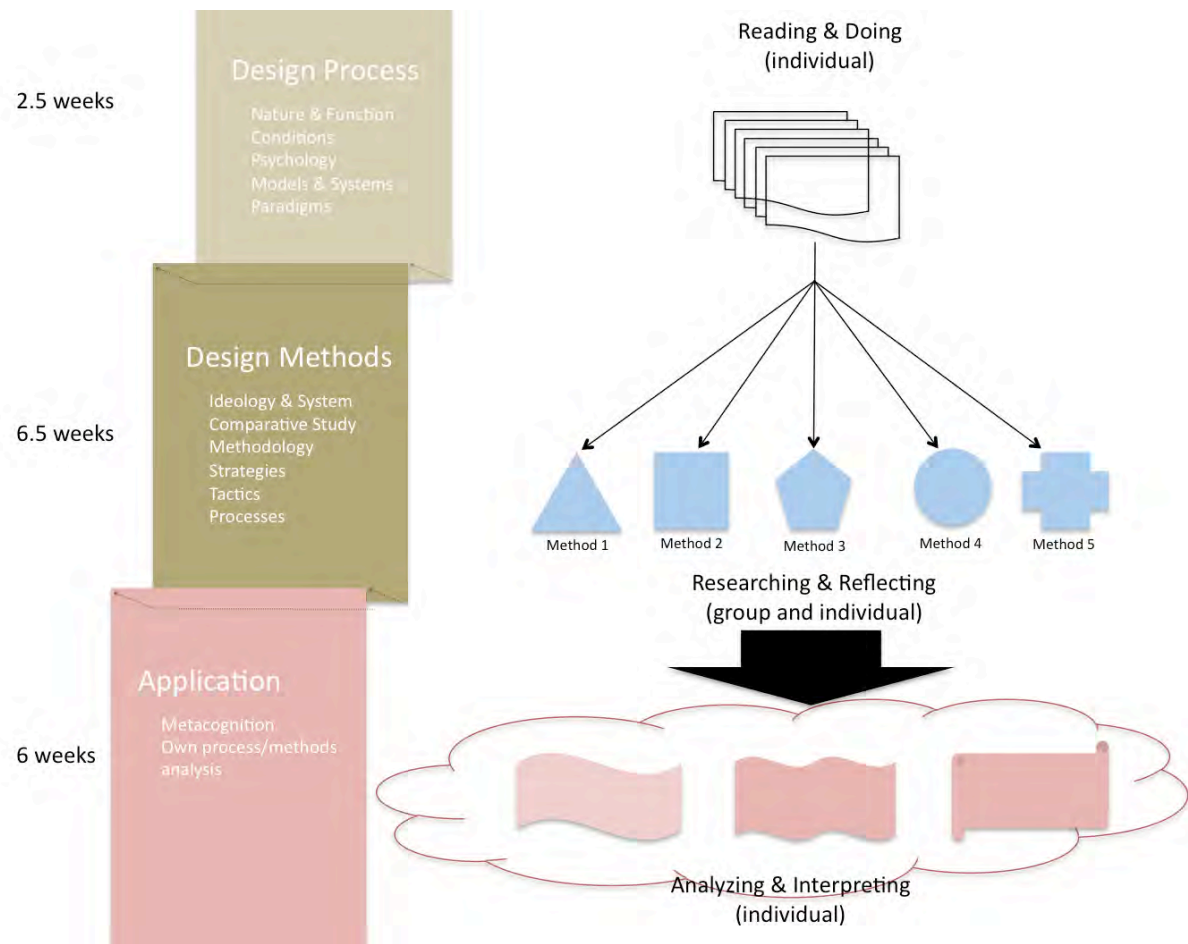
Design Methods & Process Theory



How do you manage your own design process?



Design Processes & Methods Record/Review



Bibliography of Reference (general)

Selected Books

- Akin, Ömer; Psychology of Architectural Design. London: Pion, 1986
- Antoniades. Anthony C.; Poetics of architecture: theory of design. New York: Van Nostrand Reinhold, 1992
- Bayles David and Ted Orland; Art & Fear. Santa Cruz, CA: The Image Continuum, 1993
- Broadbent, Geoffrey and Anthony Ward; Design methods in architecture. New York, G. Wittenborn, 1969
- Ching, Francis. Architecture: Form, Space, and Order. New York: J.Wiley, 2007
- Cross, Nigel. Design Thinking. New York: Bloomsbury Academic, 2016
- Cross, Nigel, Christiaans, Henri and Kees Dorst; Analysing Design Activity. New York : Wiley, 1996.
- Clark, Roger and Pause, Michael. Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis. New York: Wiley, 2012
- Dorst, Kees, Understanding Design. Amsterdam: BIS, 2003.
- Durand, Jean-Nicolas-Louis. Précis des leçons d'architecture données à l'École royale polytechnique. Chez l'auteur; (1809) and his 1813's Nouveau Précis ...
- Fishel, Catharine; 401 Design Meditations. Gloucester, MA: Rockport Publishers, 2005
- Fobing, Don and Jim Bognall; The New Universal Traveller. Los Altos, CA: Williams Kaufmann, 1981
- Groat, Linda and Wang, David. Architectural Research Methods. Hoboken, NJ: Wiley, 2013
- Hanks, Kurt; Design Yourself ! Los Altos, CA: William Kaufmann Inc., 1978
- Harrison, Andrew; Making and Thinking: A Study of Intelligent Activities. Hassocks: UK Harvester Press, 1978
- Gladwell, Malcolm; Blink. The Power of Thinking without Thinking. New York: Little, Brown, and Co, 2005
- Jones, J. Christopher; Design methods : seeds of human futures. New York: J. Wiley, 1981.
- Lawson, Bryan; What Designers Know. Burlingam, MA: Architectural Press, 2004
- Lawson, Bryan; How designers think. London ; Boston : Butterworth Architecture, 1990.

Mallgrave, Harry Francies. The Architect's Brain. UK: Wiley-Blackwell, 2011
Plowright, Philip. Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge, 2014
Schön, Donald; The Reflective Practitioner. New York: Basic Books Inc., 1983
Rowe, Peter, Design Thinking. Cambridge, MA: MIT Press, 1987
Steele, James (ed); Architecture in process. London: Academy Editions,1994.
Zeisel, John. Inquiry by Design. New York: Norton & Company, 2006

Selected Articles

Akin, Ömer; *Necessary Conditions for Design Expertise and Creativity*; Design Studies, 11: 2, 1990, pp. 107-113
Akin Ömer; *Exploration of the Design Process*; Design Methods & Theories, 1979, 13: 3/4, pp.115-119
Anderson, Stanford; *Architectural Design as a System of Research Programmes*; Design Studies, 5: 3, 1984, pp.147-150
Bermudez, Julio; *On the Architectural Design Parti*, (2006), (**available online**)
Bermudez, Julio; *On Paradigms & Avant Garde: Peeking into the Architectural Mind*; in Design Methods 30:3, 1996, pp.2368-2396 (**available online**)
Bermudez, Julio; *Beginner's Mind: Design Mind*, in S.Temple (ed.): Proceedings of the 21st National Conference on the Beginning Design Student. University of Texas, San Antonio (2006), pp.1-8 (**available online**)
Chan Chiu-Shui; *Cognitive Process in Architectural Design Problem Solving*; Design Studies, 11: 2, 1990, pp.60-80
Conall, S and O. Cathain; *Why is Design Logically Impossible?*; Design Studies, 3: 3, 1982, pp.123-125
Evbuomwan, N.F.O et al; *A Survey of Design Philosophies, Models, Methods and Systems*; Proc. of the Institution of Mechanical Engineers Part B Journal of Engineering Manufacture 210(42):301-320, May 1996 9 (**available online**)
Cross, Nigel; *The Nature and Nurture of Design Ability*; Design Studies, 11: 3, pp. 127-140 (**available online**)
Cross, Nigel; *Designerly Ways of Knowing*; Design Studies, 3: 4, 1982, pp. 221-227 (**available online**)
Gross, Mark and Aaron Fleisher; *Design as the Exploration of Constraints*; Design Studies.5: 3,1984, pp.137-138
Harris, James; *Design Methods and Architectural Theory*; Design Methods & Theories,13: 1, 1979, pp.10-14
Moneo, Rafael; *On Typology*; Oppositions 13 (Summer 1978), pp 1-45 (**available online**)
Thomas, John and John Carroll; *The Psychology Study of Design*; Design Studies, 1: 1, 1979; pp.5-11
Ward, Anthony; *Phenomenological Analysis in the Design Process*; Design Studies, 10: 1, 1989, pp.53-66
Willem, Raymond A; *Design and Science*; Design Studies, 11: 1, 1990, pp.43-47

Please, refer to each particular assignment (to be handed-out separately) for specifics references.