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|  | **LMC-6350**  The spatial construction of meaning: Design formulation and design cognition |

**1. Instructor Name, Contact Information and Office Hours**

Instructor: Kenneth Knoespel

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Meetings by Appointment

**2. Course Prerequisites:**(None)

**3. Course Description**

The course deals with design formulation and the way in which space is manipulated to construct meaning as part of design formulation. We use the word “formulation” to refer to the formal aims that emerge within the process of design as opposed to the aims that are usually given at the outset as part of the conventionally defined design program. Thus, formulation bears on our intuitions and our understanding regarding the logical construction as well as the experiential fabric of built form. The word “meaning”, as used in this context, refers the intrinsic principles that allow us to make deliberate design decisions. We see formulation and meaning as intimately bound up with the manipulation of specific media: In the case of architecture, media do not only include the materials that make up the body of buildings, but also, and most importantly, space. Space, its logical structure, its geometry and its experiential correlates are the primary focus of the course.

The course is run as an experimental laboratory including lectures, design exercises and seminars. Over the last number of years we took works in other symbolic media as a point of departure and questioned whether they can be used as programs for architectural design. This led us to better appreciate how meaning cannot be translated across symbolic forms but has to be reconstructed according to the internal logic of different symbolic media. At the same time, we were able to examine how metaphors and topologies that are fundamental to culture, cognition and experience can be reflexively manipulated in architectural design.

This year the course has a different format. We will examine work and the fundamental spatial ideas, metaphors and relationships that characterize different models of work. Our aim will be to come up with alternative diagrammatic formulations of how different kinds of work, or aspects of work, might be defined, organized and supported; with different diagrammatic formulations of how the boundaries between work and non-work could be negotiated; alternative values according to which work can be judged, including not only profitability, but also productivity, creativity, satisfaction, learning and development; and alternative aspects of environment that support work, including not only spatial organization and furniture but also atmosphere, the projection of information and the registration of the presence of others. As with previews years, we will retain the emphasis on studying different media and will seek ideas about work not only in the immediately related disciplines of organization theory and management but also in film, literature, art and indeed architecture.

**4. Learning Outcomes**

* Demonstrate knowledge, comprehension, and application of the tools and formal design elements of digital media design.
* Demonstrate the ability to analyze and critically evaluate existing digital media artifacts, services, and environments using formal knowledge, and to explain and defend one's critical evaluation.
* Demonstrate the ability to devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within recognized traditions of practice.

**5. Required Texts**

*The meaning of form: interpretative frameworks*

*1a. Evans R, 1995, “Perturbed Circles” in The Projective Cast (Cambridge, MA: MIT Press), 2-47, 372-377*

*1b. Panofsky E, 1957, “Iconography and Iconology: An Introduction to the Study of Renaissance Art” , in Meaning in the Visual Arts (New York: Doubleday Anchor Books) 26-54*

*1c. Baxandal M, 1985, “Pictures and Ideas: Chardin’s A Lady Taking Tea” in Patterns of Intention (New Haven: Yale University Press)*

*Notational devices and morphologies of meaning*

*2a. Goodman N, 1976, “Notational Systems”, in Languages of Art (New York: Hackett Publishing Co), 127-173*

*2b. Langer S, 1942, “Discursive and Presentational Forms”, in Philosophy in a New Key (Harvard, MA: Harvard University Press), 79-102*

*2c. Kipnis J (ed), 2001, Perfect Acts of Architecture (New York: Harry N Abrams).*

*Metaphorical extensions of spatial meaning*

*3.1. Lakoff G, Johnson M, 1999, Chapters 1-5 in Philosophy in the Flesh (New York: Basic Books)*

*3.2 O’ Keefe J, 1999, “The Spatial Prepositions in English, Vector Grammar, and the Cognitive Map Theory”, in Bloom P, Peterson M A, Nadel L, Garrett MF (eds), Language and Space (Cambridge MA: MIT Press), 277-316*

*Codes of perception and rules of construction*

*4a. Rowe C, Slutzky R, 1976, “Transparency: Literal and Phenomenal”, in Rowe C, The Mathematics of the Ideal Villa and Other Essays (Cambridge MA: MIT Press, 159-184); also in Rowe C, Slutzky R, Hoesli B, 1997, Transparency (Birkhauser)*

*4b. Knight T, 1994, Transformations in Design, A Formal Approach to Stylistic Change and Innovation in the Visual Arts (Cambridge: Cambridge University Press)*

**6. Graded Assignments**

The grade is based on the second and third exercises (35% and 45% respectively) and moderated according to the first exercise and the general participation in the class (20%).

**7. Attendance Policy**

Attendance and punctuality are mandatory. Three or more unexcused absences will result in a half grade point reduction. An **excused** absence is one in which permission is requested in advance and you have a legitimate reason to skip class, such as an illness. You are expected to make up what you missed by checking with other students and reviewing lecture materials on the web site.

**8. Information for Students with Disabilities**

Please notify the instructor if you have any disabilities with which you need special assistance or consideration. The campus disability assistance program can be contacted through ADAPTS: <http://www.adapts.gatech.edu>

**9. Honor Code Statement**

Students are expected to adhere to the Georgia Tech Honor Code:

<http://www.honor.gatech.edu/plugins/content/index.php?id=9>

* Please note that since this class emphasizes team effort, collaboration is encouraged, but please bear in mind that part of your evaluation for teamwork will be made by your peers. This means it’s important to fulfill your team responsibilities and complete your assignments on time.
* Any works appropriated for your project (such as art assets or music) should be cited both within the project and the final design documents.

**10. Course Schedule**

**Week 1:** Develop rough diagrams, or rather diagrammatic notes, describing different spatial dimensions of work.

**Week 2:** Architectural exploration

**Week 3:** *An object*: Students are asked to choose an object that is part of a work situation and to develop diagrammatic ideas about its spatial implications and potentialities. Examples could include furniture such as the rotating chair or the composite desk, or equipment, such as the portable computer, the video projector or the computerized board.

**Week 4:** *A behavioral setting*: Students are asked to chose an activity or behavior and to develop diagrammatic ideas about its spatial implications and potentialities. Examples could include the informal face-to-face generation of ideas, communications across space, learning what is going on in a new environment, using the environment as a collective memory device, or using the environment as a symbol of status and identity.

**Week 5:** *A condition of the self*: Students are asked to consider different conditions in which the self is placed during work and to diagram their spatial correlates. Examples would include concentrating for solitary work; becoming distracted or stimulated according to activities and events occurring in the background of one’s work; using other people as resources to get information, advice or ideas.

*A text regarding the design or the work environment*. Design guides include diagrammatic statements of design principles. In some cases, design guides include diagrammatic comparisons between different types of workplace and these comparisons bring forth particular principles of spatial organization. Students are asked to diagram the implications of different planning strategies, or the differences between alternative planning strategies.

*A text regarding the organization of work*. Some of the literature on organization theory and management entails powerful spatial ideas. Thus, the workplace can alternatively be described as a chessboard, when the disposition of employees and activities is subject to rigorous centralized control, or as a street, when informal interactions are encouraged. Students are asked to diagram the explicit or implicit spatial suppositions of different organizational ideas.

It is important to think about appropriate metaphors and analogies that may facilitate the task. For instance, a bar, a coffee shop or a street may be appropriate analogies for an environment aimed at informal interaction, a museum may be an appropriate analogy when discussing the work environment in terms of visual information, a portable computer may function as a notebook, a window, a library or a meeting place, a chair may function as a theatrical prop. Looking at one object or issue in terms of alternative metaphors is a very good way to start diagramming ideas about it.

It is also important to look at precedent as a source of ideas. Where a building or setting you have visited or have studied in publications inspires your ideas it is important to resist providing literal representations or images of the building and to try to diagram more abstractly the essential principles that you think are exemplified by the building or setting.

Part two: design formulation

**Week 6:** Fundamental questions about design and the spatial construction of meaning.

**Week 7:** The logical construction of form

**Week 8:** Design reasoning and abduction;

**Week 9:** The nature and role of fundamental spatial metaphors;

**Week 10:** Morphologies of embodied experience.

In order to contribute to the discussion, students are asked to select at least two texts, summarize each of them, and write their own critical comparison, drawing out any issues that are of particular interest to them. They are also asked to engage additional readings that may bear on the two texts, as appropriate.

**Part three: formulating a design idea**

**Week 11:** Inflected Metaphors

**Week 12:** Statement of intentions and design principles

**Week 13:** Individual Projects

**Week 14:** Individual Projects

**Week 15:** Presentations

**Week 16:** Presentations