

Department of Architecture
College of Environmental Design

Arch 207
Fall 79
Alexander

DESCRIPTION

1. Course number and units. Architecture 207. 4 units.
2. Course title: INTRODUCTION TO GEOMETRY
3. Quarters offered: Fall only
4. Class meetings per week: TuTh 7.30-11.30 evening.
5. Prerequisites: Concurrent enrollment in Arch 201, section 1 preferred
6. Instructor: Christopher Alexander
7. Final examination; None
8. Evaluation of student work: Design exercises, assigned class work, and class participation.

NOTE: First class meeting Tuesday 25th September, 7.30 pm, Wurster
4th floor, same place as Arch 201, section 1.

COURSE OBJECTIVES

In the end all design is concerned with the shape of things: with their geometry. Yet there is almost no teaching which concentrates on the geometry of space itself, which teaches the difference between what is profound and not profound, in the shape, or geometry, or color alone.

We have, in the last two to three years, made a series of remarkable discoveries about the nature of space itself. These discoveries show that space is not a neutral medium, but that, according to the way it is organised, it can be harmonious or not, orderly in a well defined sense... and that when it is "orderly" in this sense, it becomes profound, heartfelt, significant, beautiful.

Further, when we understand this "orderliness" of space, the distinction between "ornament" and "function" introduced by the modern movement, disappears, and we are left with a single conception of space which is both functional and ornamental... in which the question of how a building works is intimately connected with the way the building is made, shaped, and

ornamented, and it becomes almost inconceivable to try and separate the two, or to do one without the other.

In this course, I shall try to teach the fundamentals of this subject matter.

COURSE ORGANISATION

There are three main parts to the course:

1. Learning to recognise the structure of space which has this harmony and order in it, and learning to distinguish cases of order from cases of disorder. *? shouldn't this be 1st & merely a GIVEN?*
2. Learning to understand the dozen or so fundamental properties of space which are the necessary and sufficient preconditions for this order to occur:

- Levels of scale
- Boundaries
- Good shape
- Alternating repetition
- Centers
- Positive space
- Contrast
- Ambiguity
- Deep interlock
- Symmetries
- Roughness
- Echoes
- Inner calm
- Connectedness
- The void

3. Learning to produce designs which have this harmony and order in them. This cannot be done merely by knowing the above properties, It only occurs under certain conditions, which can be taught, and in which this order is allowed to unfold of its own accord.

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The class will be taught as a mixture of lecture, discussion and laboratory, with small scale design exercises every day.

It is intended that this class will profoundly alter your capacity to design harmonious buildings... For this reason, the class is being linked to a section of 201. We assume that the results of this class will show themselves most strongly in the work you do for 201.

Students who wish to learn a functional basis, which is directly compatible with this attitude to geometry, should try to enroll in 201, section 1, since the pattern language taught in that section provides a very direct functional counterpart to the material presented in this class. However, this material

is also compatible with any approach to design at all, and we encourage students in other 201 sections to take this course as a supplement to their design section.

For those students who wish to pursue this topic further, the class will continue in the winter quarter, with more advanced problems, and with special emphasis on color.

Pattern Language Design Sequence - 1979-80.

Fall 79 Architecture 201, section 1. Design with Pattern Language I.
Winter 80 Architecture 202, section 1. Design with Pattern Language II.
Spring 80. Architecture 203: Individual projects.

Fall 79 Architecture 207: Introduction to Geometry
Winter 80 Architecture 207: Geometry and color
Spring 80 Architecture 207: Advanced topics in geometry

Winter 80 Architecture 100: The Timeless Way of Building