Catalogue Description: Accounts of the social functions of architectural space and associated design choices, across a variety of building types and scales of environmental design.

Aims:
This is a research oriented elective class, with two aims.
1. To introduce theories or architectural space and associated methods of spatial analysis that can be applied to: (a) model the human functions of buildings; (b) benchmark design alternatives; (c) evaluate competing designs to support design choices; (d) inform the design imagination.
2. Collectively pursue a particular research question, a different one each time the class is offered. This year the focus will be on understanding and representing buildings as spatial interfaces between different categories of people, experience, or function.

Learning outcomes:
The most important learning outcome of any ambitious research oriented course is not easily assessable in the short term: helping to develop a fruitful way of thinking about a field of inquiry and an area of practice. This course is associated with the following particular learning outcomes that can be readily assessed.
1. Understanding the basic theoretical concepts that help us model the human functions of building layouts.
2. Understanding and ability to work with measures of spatial patterns such as: (a) visibility and accessibility; (b) integration/closeness centrality; (c) choice/betweenness centrality; (d) rate of change of visual and spatial information as over paths of movement.
3. Ability to use computational tools for space syntax analysis, such as UCL DepthMap.

Course assignments and course assessment:
25% of the grade will be based on contributions to workshop sessions and class discussions. 75% of the grade will be based on the assessment of three class assignments.
Assignment 1 (25% of the course grade): identifying and drawing 3-D digital models of case studies. For students that have taken ARCH8866: Design + Space Syntax in Fall 2017, one case study is the studio project.
Assignment 2 (25% of the course grade): Develop representations which make key interfaces created by the design evident.
Assignment 3 (25% of the course grade): Produce a theoretical paper on the idea of ‘interface’ using the case study as example.

Readings:
Students will be expected to read closely a small number of papers and book chapters to be discussed in class (about 15 texts).

Prior knowledge and eligibility:
No prior knowledge with the software for spatial analysis is assumed.