Course Description
This course explores, without mathematics, the development of various types of great and monumental structures that have been built for economic, social or religious purposes. The structures considered will be from the pyramids to cathedrals, to the tallest buildings and longest span bridges. The latest infrastructure developments within the greater Pearl River Delta area will be included. The functional requirements of these structures, as well as the important relationship between the properties and development of construction materials and the knowledge of structural behaviour, that make the construction of significant and monumental structures possible, will be considered.

Topics
1. Loads and Forces that the Built Environment is subjected
2. Structural Elements, Structural Actions and Material Properties
3. Use of Masonry in Construction
4. Introduction of Steel to the Construction Process
5. Tall Buildings and Towers, Bridges
6. Latest developments and projects within the Greater Pearl River Delta region

Grading Scheme
• Report and Team Project

Instructor
Prof. Neil Mickleborough
Prof. Mickleborough has been a member of HKUST since 1991. He is now an Adjunct Professor in the Department of Civil and Environmental Engineering at HKUST. He is from Australia and was educated in both Australia and Canada. He has also worked and lived in Indonesia, Malaysia, Germany and Thailand as well as working in the United Arab Emirates in both Abu Dhabi and Dubai. Recently he has been an expert consultant on major infrastructure developments in the Greater Pearl River Delta region.

Having an extensive knowledge and teaching experience in the field, Prof. Mickleborough always motivates his students and creates an excellent learning environment for them. He has been teaching SISP 1306 for HKUST Summer Institute since 2011 and has received many positive comments from the students. He was ranked as one of the best instructors over the years.