1. **Title of the module**

ARCH5490 (AR549) – Form and Structure

1. **Division or partner institution which will be responsible for management of the module**

Arts and Humanities (Kent School of Architecture and Planning)

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 5

1. **The number of credits and the ECTS value which the module represents**

15 (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Spring

1. **Prerequisite and co-requisite modules**

None

1. **The course(s) of study to which the module contributes**

BA (Hons) Architecture

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to demonstrate:**
	1. A reasonable understanding of the need to critically review precedents relevant to the function, organisation and technological strategy of design proposals
	2. A reasonably developed understanding of the investigation, critical appraisal and selection of alternative structural, constructional and material systems relevant to architectural design
	3. A reasonably developed understanding of the strategies for building construction, and ability to integrate knowledge of structural principles and construction techniques
	4. A reasonably developed understanding of the physical properties and characteristics of building materials, components and systems, and the environmental impact of specification choices
	5. An awareness of the aesthetic possibilities of natural light
	6. A basic knowledge of iterative and evidence-based approaches to design
2. **The intended generic learning outcomes.
On successfully completing the module students will be able to demonstrate:**
	1. An ability to apply a reasonably developed range of communication methods and media to present design proposals clearly and effectively
	2. An ability to evaluate evidence, arguments and assumptions at a reasonably developed level in order to make and present sound judgments within a structured discourse relating to architectural culture, theory and design
	3. A reasonably developed understanding of the alternative material processes and techniques that apply to architectural design and building construction.
	4. An ability to work in teams
	5. Research skills and analytical skills
	6. An ability to produce reports which are clear, analytical and logical covering a range of technical issues and include appropriate illustrations
	7. An awareness of the role of research in overcoming knowledge gaps
3. **A synopsis of the curriculum**

This design module integrates concerns for structure, construction and form in the process of architectural design. The objective is to help and to encourage students to design with each of these subject areas simultaneously informing the others.

A series of lectures and seminar group exercises will introduce students to the principles of structural design including structural typologies; loads and forces; simple beam bending theory; mechanics of materials; and structural geometry. Students will be presented with strategies and qualitative methods of structural analysis which will support the activities of the module.  Basic structural theory and the study of form and construction will be consistently related to real buildings, structures and materials.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

Gordon, J. E. 1. (1978). *Structures, or Why things don't fall down*. London: Penguin
Gupta, R. S. (2010).Principles of Structural Design: Wood, Steel, and Concrete. London: Taylor & Francis.
Silver, Pete and McLean, Will. (2008). *Introduction to Architectural Technology.* London: Laurence King.
Williams, A. (2009). *Structural Analysis - In Theory and Practice*. Oxford: Butterworth-Heinemann.

1. **Learning and teaching methods**

Total Contact Hours: 23 hours
Private Study Hours: 127 hours
Total Hours: 150 hours

1. **Assessment methods**

13.1 Main assessment methods

Case Study and Structural System Model (100%)

13.2 Reassessment methods

Like for like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 | 9.6 | 9.7 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Private Study** | **X** | **X** | **X** | **X** |  | **X** | **X** |  |  | **X** |  |  | **X** |
| Lectures | **X** | **X** | **X** | **X** |  |  |  |  |  |  |  |  |  |
| Seminars | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |
| Testing and critique | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |  | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Case Study and Structural System Model | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

1. **Inclusive module design**

The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

The case studies analysed by the students are chosen in different countries of the world in order to highlight how the engineering and process is dealt in countries differently for intensive labour or construction materials. Every lecture of AR549 is video-recorded and gives international students the ability to rehearse the content of the module whenever they need.

**DIVISIONAL USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 26/02/2021 | Minor | 2021/22 | 13-14 | No |
|  |  |  |  |  |

Revised FSO Jan 2018