1. **Title of the module**

ARCH8550 (AR855) – Discourse and Theory of Bio Digital Architecture

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

Kent School of Architecture and Planning

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

Level 7

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

30 credits (15 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 programmes of study to which the module contributes**

MSc Bio Digital Architecture

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to demonstrate:**
   1. A comprehensive understanding of theories of space and spatiality.
   2. An ability to establish a position and to reflect critically on different theories in relation to the student’s idiosyncratic perspective.
   3. An awareness and comprehensive understanding of contemporary biological theory and its relevance to architecture.
   4. A comprehensive understanding of theories and models in the sciences, and influence on art and design.
   5. A comprehensive understanding of the relationship between people and buildings/their environment.
   6. An ability to think critically and cross-disciplinarily about the relevance and transfer of concepts and theory between disciplines.
2. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to demonstrate:**
   1. A comprehensive ability to think in terms of space, form and order from both a biological and architectural perspective.
   2. An ability to undertake independent cross-disciplinary research in the areas of biology and architecture and to formulate reasoned and critical judgements.
   3. Ability to independently define and appraise ideas and make reasoned judgements.
   4. An ability to write an essay and present a coherent argument dealing with knowledge and understanding of complex issues.
3. **A synopsis of the curriculum**

This module aims to develop the student’s overall understanding of contemporary scientific theories pertinent to avant-garde architectural design methodologies. Students will develop an interdisciplinary and contemporary understanding of architecture, architectural design, and how people perceive and interact through the study of concepts from other fields relevant, yet traditionally separate, to architecture; such as biology, psychology, computer science and philosophy.

The module consists of lectures that introduce and describe contemporary concepts and theories applicable to bio digital architecture, and seminars in which students will debate and analyse propositions to critically reflect on architecture, architectural design and the quality of the built environment. The aim of the module is to develop the student’s ability to write in a way that deals with complex issues, and that addresses the outcomes of the module.

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

Gruber, P. (2011). *Biomimetics in Architecture - Architecture of Life and Buildings*. Springer-Verlag, Wien.

Mertins D. 2007 Where Architecture Meets Biology: An Interview with Detlef Mertins. In *Interact or Die!* (eds J Brouwer, A Mulder), pp. 110–131. V2 Publishing

Kwinter, Sanford. (1992). “Emergence: Or the Artificial Life of Space”, in Anywhere. New York:

Rizzoli, 1992.

O'Keefe, J. and Nadel, L. (1978). Chapter 1. Remembrance of places past: a history of theories of

space, in *The Hippocampus as a Cognitive Map*. Oxford University Press, Oxford.

Pinter-Wollman, N., Fiore, S. M., Theraulaz, G. and Penn, A. (2018). *Interdisciplinary approaches for uncovering the impacts of architecture on collective behaviour.* Philosophical Transactions of the Royal Society B. Noa Pinter-Wollman, Stephen M. Fiore, Guy Theraulaz and Alan Penn (Eds.). Volume 373, Issue 1753. 19th August 2018.

Terranova, C.N. and Tromble, M. (2017). *The Routledge Companion to Biology in Art and Architecture.* Charissa N. Terranova and Meredith Tromble (Eds.). Routledge.

1. **Learning and teaching methods**

Total contact hours: 36 hours

Private study hours: 264 hours

Total study hours: 300 hours

1. **Assessment methods**
   1. Main assessment methods

Essay (5000 words) (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 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| Private Study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Lectures | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Tutorials/Seminars | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |
| Essay | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

1. **Inclusive module design**

The School 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**

Lectures, seminar teaching and tutorials will continue to draw on international source materials for historical and contemporary examples and theories of bio digital architecture.

**FACULTIES SUPPORT OFFICE 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) |
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