MODULE DESCRIPTOR

Module Title

Digital Design

Reference	SUM205	Version	5
Created	April 2023	SCQF Level	SCQF 11
Approved	June 2012	SCQF Points	15
Amended	August 2023	ECTS Points	7.5

Aims of Module

To provide the student with the ability to identify and appropriately apply best practice with regard to new and emerging working practices at the conceptual and detailing stages of a digital design based project.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Critically appraise and review new and emerging working practices in conceptual and detailed design in architecture, based upon parametric, generative, and digital paradigms.
2	Apply current working practices in specialised research of building information modelling and digital generative design.
3	Explore and evaluate innovative methods of procurement, specification and manufacturing using digital processes.

Indicative Module Content

New and emerging trends in digital conceptual design, theory and practice; architectural conceptual design, including an historical and philosophical background; exploration of digital tools available at the conceptual and detail design stages; parametric modelling at the detail design stage; interoperability; design team collaboration, including a consideration of collaborative and interactive virtual design environments; building information modelling (BIM); project data modelling.

Module Delivery

This module is primarily taught on campus. The module is delivered in taught on campus by lectures, interactive workshops, case study seminars and directed self-study. Learning is hybrid, web-based and digitised where necessary with support provided in workshops. Where this module is available as a CPD or short course, an online learning mode (OL) is adopted. The delivery is based upon self-directed learning from web-based materials. The delivery of this module will be backed by online support in the form of web-based topical workshops, case studies, moderated discussion forums and live chat sessions.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	34	N/A
Non-Contact Hours	116	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	A technical report that critically explores exercises in digital design provided by the brief, with at least one of the exercises brief and execution determined by the student identified during the presentation of the module.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The overall module grade is based on 100% weighting of Component 1 CW. An overall minimum grade D is required to pass the module. Non-submission will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None, in addition to course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

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INDICATIVE BIBLIOGRAPHY

1	Tedeschi, A. 2014, AAD Algorithms-Aided Design: Parametric Strategies using Grasshopper, Le Penseur; First Edition edition (1 Oct. 2014), 978-8895315300
2	Retsin, G. 2019, Discrete-reappraising the digital in architecture, John Wiley & Sons (22 Mar. 2019), 978-1119500346
3	Tibbits, S. 2017, Autonomous Assembly: Designing for a New Era of Collective Construction: 87. John Wiley & Sons, 978-1119102359
4	Carpo, M. 2017. The second digital turn, MIT press, 978-0262534024
5	Carpo, M. The Alphabet and the algorithm, MIT press, 978-0262515801
6	Steenson, MW. 2017, Architectural Intelligence: How Designers and Architects Created the Digital Landscape, MIT press, 978-0262037068
7	Agkathidis, A. 2017, Biomorphic structures, Architecture inspired by Nature, (form + technique), Laurence King Publishing, 978-1780679471
8	Figliola, A. Battisti, A. 2020, Post industrial robotics: Exploring informed architecture