PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title: **Architectural Design & Technology 3**	Level: **6**	Credit Value: **40**

Module code: **AUR605**	Cost Centre: **GABE**	JACS3 code: **K100**

Trimester(s) in which to be offered: **1 & 2**	With effect from: **September 2015**

Office use only: To be completed by AQSU:	Date approved: September 2015 Date revised: - Version no: 1

Existing/New: **New**	Title of module being replaced (if any):

Originating Academic School: **Applied Science, Computing & Engineering**	Module Leader: **Dr Colin Stuhlfelder**

Module duration (total hours): **400** Scheduled learning & teaching hours **96** Independent study hours: **304** Placement hours: **0**	Status: **Core**

Programme(s) in which to be offered: **BSc (Hons) Architectural Design Technology**	Pre-requisites per programme (between levels): **None**

Module Aims:

The module aims to conclude examination of the design principles and design representation skills developed at Levels 4 & 5 through the engagement of students in an urban regeneration development, culminating in the design of a significant civic/commercial building. The module will integrate into the design process a self-directed building case study where the choice of study subject reflects a particular design technology innovation that will be included as part of their own building design. Furthermore students will be expected to underpin the case study and their design with a detailed technical report on the chosen innovation, allowing them to demonstrate their ability to undertake a significant piece of independent research. To support their development, students will already be familiar with the period and the focus at this level will be specific design examples and technological advancements. These will relate to significant master planning examples, the evolution of the skyscraper, and related design technology advances over the same period but with a particular emphasis on the late 20th and early 21st Century.

As one of the modules designated only for Architectural Design Technology students, the four themes of Design, Managing, Practising and Developing (Self) required by the Chartered Institute of Architectural Technologists as part of their professional assessment will be reflected in the module content. Finally students will be expected to reflect, in their design and design technology choices, the cumulative knowledge from Level 4 and 5 modules, and the relevant content of concurrent modules, in particular at Level 6, the Construction Technology 3 (focused on Modern Methods of Construction), Inter-professional Studies, and Health & Safety Management modules. By Level 6 the students must demonstrate verbally and visually, that they understand how their designs will be built and operate through their respective lifecycles.

Intended Learning Outcomes:
Knowledge and understanding

At the end of this module, students will be able to ...

1. Evaluate a variety of qualitative and quantitative data to identify and defend the selection of a range of solutions for an output capable of addressing the complexities of the assigned project briefs (KS1, KS2, KS3, KS4, KS5, KS6, KS7, KS8, KS9, KS10);
2. Apply independently directed research methodologies and problem solving techniques to critically analyse and debate existing case studies and design technology innovations in order to communicate current and future applications and trends for the described technology (KS1, KS3, KS5, KS6, KS7, KS8, KS9, KS10);
3. Synthesise the findings of relevant research and the assumptions made in response to the brief into a detailed proposal evidencing the role of lead designer within the context of current digital information management (KS1, KS3, KS4, KS5, KS6, KS7, KS8, KS9, and KS10).

Key skills for employability

1. Written, oral and media communication skills
2. Leadership, team working and networking skills
3. Opportunity, creativity and problem solving skills
4. Information technology skills and digital literacy
5. Information management skills
6. Research skills
7. Intercultural and sustainability skills
8. Career management skills
9. Learning to learn (managing personal and professional development, self-management)
10. Numeracy

Assessment: All assessments will be based on design project briefs set for the students, with each representing an increasing level of complexity with a variety of specific requirements aimed at replicating the client/designer relationship and process as understood in the current information management context. For this module they will include a group project relating to developing a master plan for a regeneration area, a case study and a technical report. For this module a significant civic/commercial building will be designed to integrate the technology explored in the case study and technical report.

The modules will assess Learning Outcomes at multiple points as the assignments are cumulative design-based tasks and it would not aid progression if outcomes relating to design and design technology were not considered for each design response.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting	Duration (if exam)	Word count (or equivalent if appropriate)
1	1	Group Project	20%		1,000 equivalent
2	2	Case Study	20%		1,000 equivalent
3	1 & 2	Report	30%		4,000
4	1, 2 & 3	Project	30%		4,000 equivalent

Learning and Teaching Strategies:

The module will be delivered in the dedicated Architectural Design Technology studio. Learning will be based around a planned lecture series and programmed studio-based critical reviews. The reviews assess group and student progress through the stages of their responses to set project briefs in a context where all students are able to observe developments and learn not only from their own feedback, but also to contribute to and develop from the feedback received by their peers.

Working around lectures, critical reviews, and the encouragement of design discussion and evaluation, an environment of collegiality and encouragement of fellow students through the shared experience of the studio (which includes drawing boards, PCs carrying CAD programs, a plotter and other work stations) will be engendered. This should be understood as replicating the professional experience of working in an Architectural or Architectural Technologists practice.

Studio-based delivery will be supplemented with opportunities for group and individual seminars and tutorials. Furthermore guest lecturers to bring specific topic expertise into the lecture series will be encouraged, either from within the University or through the professional network related to the Built Environment. Where possible site visits will also be organised for students to meet professionals from across the sector and to experience live projects, or visit areas and buildings of note and importance.

Syllabus outline:

- Design: Consideration of design and design technology relating to large scale urban regeneration master planning, tall building development, and advancements in design technology with particular emphasis on the late 20th and the 21st centuries. Further elements will include specific examination of professional principles of communicating design through drawings, visualisations, models etc.as expected of a Chartered Architectural Technologist with further emphasis on the digital modelling and management of schemes.
- Managing: The integrated nature of the module will require examination of management techniques relating to longitudinal projects with multiple inputs, as well as balancing the need to work within UK legislation and regulations.
- Practising: Exploring the language relating to developing and communicating designs and the related technologies, material choices and the specifying of these choices in a manner expected of a Chartered Architectural Technologists, with digital modelling and management the main means of communicating the final design.
- Developing (Self): Using various examples of designs, visualisation skills and presentational techniques to assist allowing students to use the module to prepare for becoming Chartered Architectural Technologists.

Bibliography:

Essential reading:

Farr, Douglas (2010). *Sustainable Urbanism*. Hoboken: John Wiley & Sons.
Gehl, Jon (2010). *Cities for People*. Washington: Island Press.
Holt, Gary (1998). *A guide to successful dissertation study for students of the built environment*. Wolverhampton: Built Environment Research Unit.
UK/Welsh Government guidance on Building Information Modelling.

Other indicative reading:

Chartered Institute of Architectural Technologists www.ciat.org.uk
Chartered Institute of Building's Designing Buildings Wiki www.designingbuildings.co.uk

Students will be guided to online resources during the length of the course and through the VLE. As design trends are a fluid and changing consideration, they will similarly change as the module runs.

Other sources:
www.ihsti.com