1. **Title of the module**

QUSU6002 Digital Technologies in Quantity Surveying

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

Centre for Higher and Degree Apprenticeships

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

Level 6

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

15 credits (7.5 ECTS)

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

This module is being taught as part of the BSc (Hons) Quantity Surveying being delivered through a part-time distance learning approach.

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

None

1. **The programmes of study to which the module contributes**

BSc (Hons) Quantity Surveying

1. **The intended subject specific learning outcomes.**

On successfully completing the module students will be able to:

1. Evaluate the impact of BIM and other digital technologies on the construction industry.
2. Assess the impact of the current Government Construction Policy regarding BIM on: design, procurement, life cycle planning and the future economic performance of the construction industry.
3. Critically explore the implications BIM and digital technologies on the structure and working of the construction industry and dispute resolution.
4. Assess the potential legal and contractual issues raised by the use and ownership of BIM.
5. Through an introduction to capabilities of BIM software, assess its potential future impact on the roles and responsibilities of professions within the construction industry.

1. **The intended generic learning outcomes.**On successfully completing the module students will be able to:
2. Perform in-depth research.
3. Use new technologies to problem solve and communicate.
4. Engage in informed speculation.
5. Anticipate and respond to change.
6. Use hands on experience to inform critical thinking.
7. **A synopsis of the curriculum**

The introduction of new technologies and Building Information Modelling (BIM) have the potential to transform the processes by which construction is designed, costed and planned and the working practices of professions within the industry. This module explores the impact of new technologies on key phases in construction life cycle and its post completion maintenance, and the implications of government policy on the economic performance of the construction sector. It investigates how digital technologies may transform the structure, working practices and contribute to dispute resolution within the industry. By gaining an insight into BIM software it also encourages speculation about the future impact of new technologies.

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

Eynon, J. and CIOB. (2016). *The Construction Manager's BIM Handbook*. RIBA

Caneparo, L. (2014). *Digital Fabrication in Architecture, Engineering and Construction*. Springer

Wallis, J. and Rahmann, H. (2016). *Digital Fabrication in Architecture, Engineering and Construction.* Routledge

1. **Learning and teaching methods**

The total study time for this module is 150 hours incorporating online e-learning, work-based experience and private study.

Teaching is delivered as a distance learning approach. VLE-delivered e-activities, VLE-delivered work activities serve to reinforce material presented online and also relate directly to the learning objectives. These are specifically based on enabling students to relate their theoretical knowledge to the workplace.

Work-based experience serves to reinforce and provide real-life context to the material being delivered in the module.

1. **Assessment methods**

Main assessments:

Report 75% - 2,500 words

Report 25% - 1,000 words

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* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| **Private Study** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Teaching | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  |  | **x** |
| Work based experience | **x** |  | **x** | **x** | **x** |  |  | **x** | **x** |  |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| Report 1 | **x** | **x** |  |  |  | **x** | **x** | **x** | **x** | **x** |
| Report 2 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

1. **Inclusive module design**

The Centre 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**

Distance

1. **Internationalisation**

Construction often operates in an international context and the skills associated with the use of BIM is key to the successful completion of projects. The module identifies the key areas of BIM and considers international interfaces.

**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) |
| 24 Jan 19 | New | Sept 19 | New |  |
|  |  |  |  |  |