Subject Code: BRE416

COMPUTERIZATION OF CONSTRUCTION PRODUCTION AND MANAGEMENT

Level: 4
Contact Hours: Lect:21 Sem/Tut:21
Student Effort Hours: 120

Assessment Method: Coursework 50% Examination 50%
Credit Value: 3
Pre-requisites: Nil
Co-requisites: Nil
Exclusions: Nil

Subject Leader/ Lecturer/Dept.: H. Li (BRE)

Subject Aim:

This subject is intended to:

1. Develop an understanding of the practical application of computer systems and packages in construction production and management.

Learning Outcomes:

Students will demonstrate their ability to:

1. Understand and demonstrate knowledge of the construction process and the role that information technology can play to support this process.

2. Understand and demonstrate knowledge of the application of computer systems at the construction production stage.

3. Be able to appraise commercially available and tailor-made computer packages in construction production and management.

Brief Syllabus Content:

The construction process within the overall project process.

Basic concepts of Management Information Systems.

Identifying the benefits of computer based systems.

Enterprise Resource Planning.

Computerized construction management using web based project management systems for project planning, information control, material control, progress control and quality assurance.

An introduction to virtual prototyping technology and product life cycle simulation.

Learning and Teaching Approach:

Lectures and workshops will be run throughout the semester period. A lecture schedule outlining the topics to be covered will be distributed to students in the first lecture of the semester. In the workshop periods, students will be required to assess and use the systems and to prepare group assignments.

Teaching activities: Lecture (LT)/Tutorial (TU)/Seminar (SM)/Drawing (DW)/Laboratory or Practical (LB)/Studio (ST)/Workshop (WS)/Project (PJ)/Field Study (FS)/Guided Study (GS)/Visit (VS)
Assessment strategy (assessment of student performance resulting from learning tasks):

Examination and coursework will each constitute 50% of the overall assignment for the subject. The coursework mark will be based on the assignments, presentation and discussions. Two assignments with equal contribution will be set.

The examination will be based on a 2 hours examination based on materials covered in the lecture periods and background readings. Coursework by assignment and group projects will be set to assess the students’ abilities and skills required in this subject.

Reading List:

Recommended:


Supplementary:


The International Journal of Construction Information Technology, The University of Salford.

Recommended Web Sites:

- The 20th CIB W78 Conference on Information Technology in Construction: https://www.cs.auckland.ac.nz/w78/