PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title: **Construction Technology 3**	Level**: 6**	Credit Value: **20**

Module code**: AUR612**	Cost Centre: **GABE**	JACS3 code: **K210**

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

Originating Academic School:	**Applied Science, Computing & Engineering**	Module Leader	**Dave Cheesbrough**

Module duration (total hours)	**200**	Status: core/option/elective (identify programme where appropriate): **Core**
Scheduled learning & teaching hours	**48**	
Independent study Hours	**152**	
Placement hours	**0**	

Programme(s) in which to be offered: **BSc (Hons) Construction Management** **BSc (Hons) Architectural Design Technology** **BSc (Hons) Real Estate** **BSc (Hons) Construction Technology** **BSc (Hons) Facilities Management** **BEng (Hons) Renewable Energy and Sustainable Technologies**	**Pre-requisites per programme (between levels):** None

Module Aims:

This module aims to give students a thorough knowledge of those developments in Construction methods that are collectively known as Modern Methods of Construction (MMC). Beginning with drivers for and barriers to change the student will study how these MMCs have developed and what share of the market they now have. Both on site and off site manufacture will be covered as well as site procedures for each. Sustainability, in terms of both economic factors and the materials used, will be important factors in this module.

Intended Learning Outcomes:

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

Knowledge and Understanding:

1. Reflect upon the drivers for MMC and assess future potential take up (KS1,KS5,KS6,KS7)
2. Evaluate MMC and develop an in depth knowledge of one system (KS1, KS3, KS4, KS5, KS6)
3. Critically analyse the suitability of MMC for a variety of construction situations (KS3, KS5, KS6, KS7, KS10)
4. Critically review the factors of MMC that contribute to the debate surrounding affordability and sustainability (KS7, 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:

1. Presentation on one MMC
2. Essay exploring the significant differences between using MMC and building in a traditional manner.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting	Duration (if exam)	Word count (or equivalent if appropriate)
1	1 & 2	Presentation	40%	8 mins	1000
2	3 & 4	Coursework	60%		3000

Learning and Teaching Strategies:

The learning and teaching strategy has been developed to ensure that students are aware of all aspects of the use of MMC in modern construction.

Assessment 1 will provide an opportunity for an in depth discussion of how MMC affects the built environment and provides early feedback to enable students to develop the skills and abilities to successfully complete the module.

There will be a combination of approaches used:

Key lectures will impart relevant theory and identify best practice examples of MMC.

Directed study and feedback to the peer group will be used to reinforce learning.

Visits to suitable sites will enable students to see MMC in action

Guest lecturers will be used to impart specialist knowledge of MMC techniques

Syllabus outline:

- Starting with definition of MMC the module will build student knowledge of the history and development of mass market MMCs.
- The main drivers for change in the Construction Industry will be examined and how barriers to MMCs are perceived will be investigated. Each student will research one MMC in depth and produce an assessed presentation in the first Trimester.

- Trimester 2 will concentrate on the change needed within the Industry to allow us to make the best of MMCs. Topics such as sustainability (both material and fiscal) will be studied and how we can plan for MMC in all aspects of Construction will be discussed. Other factors such as legislation and industry advancements will be covered in this section

Bibliography:
Essential reading:

Ross K, *Modern Methods of House Construction (2012),* London: BRE Trust.
Gaze C et al. *MMC in Housing (2007),* London: BRE Trust.
Watts A *Modern Construction Handbook (3rd Edn 2012)* Vienna: Springer.
Stirling C, *Offsite Construction: an Introduction (2011),* London: BRE.

Other indicative reading:
Internet sources and journal articles as directed by Module Tutor

Other sources:
www.ihsti.com