

Liverpool John Moores University

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Title: ICT APPLICATIONS IN CONSTRUCTION
Status: Definitive
Code: **6158UG** (102685)
Version Start Date: 01-08-2011

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

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Academic Level: FHEQ6 **Credit Value:** 12.00 **Total Delivered Hours:** 48.00

Total Learning Hours: 120 **Private Study:** 72

Delivery Options

Course typically offered: Summer

Component	Contact Hours
Lecture	24.000
Workshop	24.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Discursive essay 1000 words	50.0	
Technology	AS2	Practical exercise demonstrating competence in the use of design, production and cost management software. (4000 words or equivalent)	50.0	

Aims

To provide students with an understanding of the purpose of construction informatics and its role in the AEC sector and to introduce and develop expertise in the use of subject specific software to students.

Learning Outcomes

After completing the module the student should be able to:

- 1 Discuss the role of informatics in society in general and in AEC in particular.
- 2 Critically evaluate the strategic importance of information in the AEC sector.
- 3 Assess the potential of the application of common IT technologies to specific construction problems such as programming, costing and design coordination.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

ESSAY	1	2
TECHNOLOGICAL TEST	3	

Outline Syllabus

Construction Informatics

Paradigms of design, the role of technology

Strategic perspective of IT in the construction industry

Role of IT in the construction company

Design software applications, how they work

Programming software application, functionality and limits

Costing software applications, functionality and limits

Learning Activities

The lecture programme will seek to introduce the students to the basic theories and concepts of construction information. The workshops will provide students with examples of construction informatics applications. Projects will be used to replicate problems that industry faces and demonstrate the application of commonly used software packages for design, programming and financial control.

References

Course Material	Book
Author	Sun, M. and Howard, R.
Publishing Year	2004
Title	Understanding IT in Construction

Subtitle	
Edition	
Publisher	Spon, London, e-book version: http://www.ebook.tandf.co.uk
ISBN	

Course Material	Book
Author	Alshawi, M.
Publishing Year	2009
Title	Rethinking IT in Construction and Engineering readiness
Subtitle	
Edition	
Publisher	Blackwells
ISBN	

Course Material	Book
Author	Brandon, P, Betts, M.
Publishing Year	1995
Title	Integrated Construction Information
Subtitle	
Edition	
Publisher	Spon Press, London
ISBN	

Course Material	Book
Author	Eastman, C.M.
Publishing Year	1999
Title	Building Product Models: Computer Environments supporting Design and Construction
Subtitle	
Edition	
Publisher	CRC Press
ISBN	

Course Material	Book
Author	Newton, P, Hampson, K. & Drogemuller, R.
Publishing Year	2009
Title	Technology, Design and Process Innovation in the Built Environment
Subtitle	
Edition	
Publisher	Spon Press
ISBN	

Course Material	Book
Author	Sommerville, J. and Craig, N.
Publishing Year	2006

Title	Implementing IT in Construction
Subtitle	
Edition	
Publisher	Taylor and Francis
ISBN	

Notes

This module develops students competence in the use of standard industry software applications and also develops a critical appreciation of the role information plays in design, production and cost management in the AEC sector.