

Liverpool John Moores University

Title: BUSINESS SYSTEMS DEVELOPMENT
Status: Definitive
Code: **5003COMP** (102881)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

Team	Leader
Janet Lunn	Y

Academic Level: FHEQ5
Credit Value: 24.00
Total Delivered Hours: 72.00
Total Learning Hours: 240
Private Study: 168

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24.000
Practical	24.000
Tutorial	24.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Individual report on the utilisation of an appropriate structured analysis and design methodology.	50.0	
Report	AS2	Individual report on the utilisation of an appropriate object orientated analysis and design approach.	50.0	

Aims

*To present the techniques and concepts of systems analysis and design.
To develop the concepts of object oriented philosophy as they apply to software*

system analysis.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain the roles and functions involved in the production of information systems.
- 2 Analyse the requirements of a business system using structured techniques.
- 3 Model a business system.
- 4 Explain the concepts and principles of the object-oriented paradigm used in systems development.
- 5 Model an object-oriented system development.

Learning Outcomes of Assessments

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

Design methodology	1	2	3
OO analysis	3	4	5

Outline Syllabus

Investigation and information gathering.

Requirements analysis using prototyping and structured techniques e.g. DFDs, ERDs, ELHs.

Selection of appropriate options.

Feasibility studies and the role of cost/benefit analysis.

Analysis phase - the existing system, incorporating new requirements, greenfield systems, required systems.

Design phase - logical and physical design.

Systems integration, installation, implementation and training.

All phases will cover the roles and functions of personnel, plus the appropriate use of and standards for documentation.

Overview of object oriented analysis and design, UML.

Object Structure: Concepts, Objects, Class, Concepts Vs Object Type, Association.

Object structure, Approaches to object-structure modeling.

Objects, Mappings, Relationships, multiplicity, encapsulation, polymorphism.

Class: subclass and superclass, states.

Use cases and use case diagrams, scenario modeling.

UML component diagrams and deployment diagrams.

Object Behaviour: State changes, Events, Operations, Methods, Triggers, Control Conditions.

UML collaboration diagrams and sequence diagrams.

UML statechart diagrams and activity diagrams.

The similarities and differences between the UML and other object-orientated methods.

Learning Activities

Lectures, tutorials and coursework.

References

Course Material	Book
Author	Britton, C. & Doake, J.
Publishing Year	2006
Title	Software System Development: A Gentle Introduction
Subtitle	
Edition	4th Edition
Publisher	McGraw Hill
ISBN	

Course Material	Book
Author	Hoffer, J.A.
Publishing Year	2007
Title	Modern Systems Analysis and Design
Subtitle	
Edition	5th Edition
Publisher	Prentice Hall
ISBN	

Course Material	Book
Author	Skidmore, S., Eva, M.
Publishing Year	2003
Title	Introducing Systems Development
Subtitle	
Edition	
Publisher	Palgrave McMillan
ISBN	

Course Material	Book
Author	Martin, J. and Odell, J.
Publishing Year	1997
Title	Object-oriented methods: a foundation (UML edition)
Subtitle	
Edition	2nd Edition
Publisher	Prentice Hall
ISBN	

Course Material	Book
Author	Fowler, M. & Scott, K.
Publishing Year	2003

Title	UML distilled: a brief guide to the Standard Object Modeling Language
Subtitle	
Edition	3rd Edition
Publisher	Prentice Hall
ISBN	

Course Material	Book
Author	Rumbaugh, J., Jacobson, I., Booch, G.
Publishing Year	2004
Title	The unified modeling language Reference Manual
Subtitle	
Edition	2nd Edition
Publisher	Addison Wesley
ISBN	

Course Material	Book
Author	Bennett,S. Mc Robb, S. Farmer, R.
Publishing Year	2006
Title	Object-orientated systems analysis and design using UML
Subtitle	
Edition	3rd Edition
Publisher	McGraw Hill
ISBN	

Course Material	Book
Author	Priestly, M.
Publishing Year	2000
Title	Practical object -orientated design with UML
Subtitle	
Edition	2nd Edition
Publisher	McGraw Hill
ISBN	

Notes

This module covers the theory and practice of formal structured systems analysis and design with an emphasis on object-oriented analysis and design in software development.