

Liverpool John Moores University

Title: OBJECT ORIENTED SYSTEMS DEVELOPMENT
Status: Definitive
Code: **5104COMP** (121226)
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
Glyn Hughes	Y

Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 55
Total Learning Hours: 200 **Private Study:** 145

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	33
Practical	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	UML Based Object Oriented Design	40	
Technology	AS2	Object Oriented Programming	60	

Aims

To investigate the underpinnings of object orientated design through the unified modelling language.

To implement an object oriented design with a modern language and application programming interface.

To utilize a modern integrated development environment in developing object oriented program code.

Learning Outcomes

After completing the module the student should be able to:

- 1 Illustrate the concepts of object oriented design.
- 2 Specify object oriented designs using the unified modelling language.
- 3 Implement object oriented designs using object oriented program code.
- 4 Employ an application programming interface using an integrated development environment.

Learning Outcomes of Assessments

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

UML Report	1	2
OO Programming	3	4

Outline Syllabus

OOAD (Object Oriented Analysis & Design)
Requirements Analysis
Identifying Classes, Attributes & Operations.
Identifying Object States / Activities.
Verifying Class Design.
Collaboration Amongst Objects.
Visibility, Navigability & Inheritance.

OOP (Object Oriented Programming)
Classes & Objects.
Arrays.
Collections.
Generics.
Interfaces.
Threading.
Object Relational Mapping.

Learning Activities

Learning activities include lectures and tutorials where students are encouraged to ask questions / discuss scenarios and supported labs where students are encouraged to put theory gained through lectures and tutorials into practice. Directed reading against appropriate industry and research sources further reinforces learning.

Notes

This module explores the object oriented paradigm from analysis, through design, implementation and testing. Initially, the unified modelling language is employed to illustrate key concepts whilst later on; validated designs are matured to fully functioning oriented systems.