

Liverpool John Moores University

Title: PROGRAMMING AND SOFTWARE ENGINEERING
Status: Definitive
Code: **6015ENG** (106220)
Version Start Date: 01-08-2011

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Tony Moore	Y

Academic Level: FHEQ6
Credit Value: 24.00
Total Delivered Hours: 62.00
Total Learning Hours: 240
Private Study: 178

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24.000
Practical	24.000
Tutorial	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	50.0	2.00
Essay	AS2	Coursework - Design & Programming	50.0	

Aims

*To explain the programming constructs of a high level programming language, including object oriented programming and the development of visual applications.
To provide practice in the use of software development systems.
To identify the principles of software engineering in the software development life cycle.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Design and implement a computer program in a high level language
- 2 Translate a programming specification to a set of program constructs
- 3 Plan a software development project
- 4 Carry out a high level design

Learning Outcomes of Assessments

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

EXAM	3	4
CW	1	2

Outline Syllabus

High level language constructs: variables, conditional statements, loops, string handling, input-output, data structures, classes, inheritance, file handling, operating systems interfacing.

Program development: functions, multiple files, development tools

The software development life cycle

Quality issues, complexity

Design approaches: bottom up, top down, coupling and cohesion

Modelling techniques: entity-relation, data flow diagrams, object oriented inheritance models, structure charts

Databases, Normalisation

Learning Activities

By a combination of lectures, tutorials and laboratories

References

Course Material	Book
Author	Sommerville, I.
Publishing Year	2001
Title	Software Engineering
Subtitle	
Edition	6th
Publisher	Addison Wesley
ISBN	020139815X

Notes

This module outlines the principle of program design and provides undergraduates with the ability to use a comprehensive set of programming constructs.