Liverpool John Moores University

Title:	Advanced Object-oriented Programming
Status:	Definitive
Code:	**5508ENGSBC** (119423)
Version Start Date:	01-08-2016
Owning School/Faculty:	Maritime and Mechanical Engineering
Teaching School/Faculty:	The Sino-British College

Team	Leader
Russell English	Y

Academic Level:	FHEQ5	**Credit Value:**	12	**Total Delivered Hours:**	35
Total Learning Hours:	120	**Private Study:**	85		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	10
Practical	25

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	CW1		35	
Essay	CW2		35	
Test	test		30	

Aims

This module will provide students with the skills to design and implement high quality, robust software using advanced object-oriented programming techniques within the context of a high-level programming language.

Learning Outcomes

After completing the module the student should be able to:

1 Understand and implement advanced programming techniques using Java
2 Utilise complex programming elements such as user interfaces, multiprocessing, and exception handling
3 Select suitable data structures and algorithms when creating software
4 Apply appropriate design paradigms in the creation of software

Learning Outcomes of Assessments

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

coursework 1	1	2		
coursework 2	3	4		
class test	1	2	3	4

Outline Syllabus

Java programming overview; UML diagrams; code conventions; classes and objects; class hierarchies; abstract data types; inheritance; interfaces; encapsulation; polymorphism; information hiding; packages; exceptions; concurrent programming; linked lists; binary search trees; input/output; graphical user interfaces; software design techniques.

Learning Activities

Delivered with a range of lectures and practical sessions.

Notes

This module will provide students with the skills to design and implement high quality, robust software using advanced object-oriented programming techniques within the context of a high-level programming language.