Anglia Ruskin University

Module Definition Form (MDF)

Module code: MOD005437	**Version:** 1 **Date Amended:** 04/May/2016

1. Module Title
Object-Oriented Programming Development

2a. Module Leader
Jamie Myland

2b. Department
Department of Computing and Technology

2c. Faculty
Faculty of Science and Technology

3a. Level
5

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions			
Type	**Module Code**	**Module Name**	**Condition**
Pre-requisite:	MOD005424	Programming Concepts	Compulsory
Pre-requisite:	MOD005423	Maths for Computing	Compulsory
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Object oriented programming is a programming language model organised around objects rather than actions and data rather than logic. Industry dictates that the reuse of code is a fundamental skill required of graduates as this leads to cleaner, more robust code. Object Oriented programming also facilitates the generation of Test Driven Development.

The module will expose students to the fundamentals of Object Oriented Program Design and Development. Students will receive a solid understanding of Object Oriented Techniques including Inheritance, Association, Aggregation, Polymorphism and Encapsulation and how these techniques are utilised in a business environment. Design techniques such as CRC cards will aid the creation of software and students will develop Class Diagrams and other UML documentation.

Students will gain practical programming knowledge through the development of programs in an object-oriented language such as C# and Java.

The learning will be assessed through weekly in-class tasks and by the students writing a program to meet a brief supported by a report justifying their design choices and object-oriented architecture.

Delivery of this module will be supported using the Virtual Learning Environment and students will be expected to undertake interactive online activities on a weekly basis to support understanding and to share knowledge.

6b. Outline Content

What is Object Oriented Development?

Inheritance

Association and Aggregation

Polymorphism and Encapsulation

UML for software design

Object Oriented solutions

SOLID concepts

6c. Key Texts/Literature
The reading list to support this module is available at: http://readinglists.anglia.ac.uk/modules/mod005437

6d. Specialist Learning Resources
Computer suite with Visual Studio IDE

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Identify and select UML tools Object Oriented development
2	Knowledge and Understanding	Apply SOLID techniques to the design of Object Oriented programs
3	Intellectual, practical, affective and transferrable skills	Develop Object Oriented solutions to real world programming problems
4	Intellectual, practical, affective and transferrable skills	Create appropriate documentation for OO solutions

8a. Module Occurrence to which this MDF Refers

Year	Occurrence	Period	Location	Mode of Delivery
2017/8	F01UCP	Semester 1	University Centre, Peterborough	Face to Face

8b. Learning Activities for the above Module Occurrence

Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	12	1,2,3,4	1 hr x 12 weeks
Other teacher managed learning	24	1,2,3,4	2 hr x 12 weeks
Student managed learning	114	1,2,3,4	Reading, research and assignment preparation
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Practical	1,2	30 (%)	Fine Grade	30 (%)
Class based activities 1000 word equivalent					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	3,4	70 (%)	Fine Grade	30 (%)
Assignment 1500 words					

In order to pass this module, students are required to achieve an overall mark of 40%.
In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment of as specified above
(b) pass any pass/fail elements