



MODULE SPECIFICATION

Part 1: Information			
Module Title	Software Design and Development		
Module Code	UFCFPE-30-1	Level	Level 4
For implementation from	2020-21		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Overview: In this module you will develop your understanding of software planning, design, implementation and testing.</p> <p>Educational Aims: On successful completion of this module you will be able to use a suitable programming language and methodologies to facilitate the development of software systems.</p> <p>Outline Syllabus: Design methodologies, e.g. pseudo code, step-wise refinement, structure diagrams and flow charts.</p> <p>Basics of programming languages, e.g. procedural, event-driven, Introduction to object oriented techniques...etc.</p> <p>Data storage: Files, variables, constants, literals, pre-defined and user defined data types, program elements.</p> <p>Software constructs: Sequence, selection and iteration.</p> <p>Good programming practice, e.g. Modularisation, divide and conquer, use and re-use of modules, pre-defined and user defined functions and the attributes of a 'good' program.</p>

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Documentation requirements: Internal (e.g. variable names, comments) and external documentation (e.g. user guide).

Program testing: Types of error, test plans and testing methodologies.

Teaching and Learning Methods: Introductory lectures covering the fundamentals and technical underpinning of the module for the first assessment before progressing onto practical delivery through a series of lessons, workshops and practical tasks in the classroom to develop the tools and techniques required to complete the practical assessment for this module.

Part 3: Assessment

Software Design and Development is assessed using a combination of a practical 2 hour Time Constrained Assessment (TCA) and Software Development practical portfolio a to reflect industry practice.

During the TCA students will be required to design a software solution based upon a supplied brief using industry standard design software and techniques.

The practical portfolio will require students apply their knowledge to develop and test a software solution. The completed software solution should utilise industry best practice, and include extensive testing.

Tutor-lead formative feedback will be available throughout the module.

First Sit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component A	✓	40 %	Practical Assessment (in-class) (2 hours)
Portfolio - Component B		60 %	Practical Portfolio
Resit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component A	✓	40 %	In-Class Test (2 hours)
Portfolio - Component B		60 %	Practical Portfolio

Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
	Module Learning Outcomes	Reference
	Demonstrate an understanding of a range of recognised design methodologies for solving a problem specification	MO1
	Design software to meet a requirement's specification	MO2
	Implement, test, debug and document software to meet a requirement's specification	MO3
	Identify, evaluate and apply best practices and standards	MO4
	Apply basic object-oriented techniques to solve a problem.	MO5
Contact Hours	Independent Study Hours:	

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	Independent study/self-guided study	192
	Total Independent Study Hours:	192
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	108
	Total Scheduled Learning and Teaching Hours:	108
	Hours to be allocated	300
	Allocated Hours	300
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://rl.talis.com/3/uwe/lists/D6728D9D-EDD9-401F-A0F5-C4717CF7F4CA.html</p>	

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Applied Computing [Sep][FT][UCW][3yrs] BSc (Hons) 2020-21

Applied Computing [Sep][FT][UCW][2yrs] FdSc 2020-21

Applied Computing [Sep][PT][UCW][3yrs] FdSc 2020-21