STUDENT AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Information			
Module Title	Information Technology		
Module Code	UFCFR3-30-1	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

Educational Aims: In addition to the Learning Outcomes the educational experience may explore, develop, and practise but not formally discretely assess the following:

Demonstrate key transferable skills in reflective practice, research, analysis and summary.

Demonstrate key transferable skills in application use.

Outline Syllabus: Information Technology in context - Important individuals, organisations and projects in the evolution of digital technologies. The context and application of desktop systems, mobile technologies, business servers, games consoles, multimedia, scientific systems.
An introduction to the principles of computer science.

Computer systems architecture – the principles of design of digital devices, basic components, infrastructures and standards.

Networks - An introduction to the role of networks. Network standards, models and protocols. Basic network design, management and security. Internet infrastructure, applications and Cloud Computing.

Systems development: problem definition and specification, algorithms. Software management, configuration and testing. Introduction to software tools – programming languages. A practical introduction to programming principles and concepts, and IDEs. Principles of compilers, interpreters etc.

Basic programming concepts: program structure and syntax; using primitives: declarations, assignments, constants, arithmetic operations and expressions, string handling; simple input and output. Program Control: defining and using sequence, selection and iteration techniques; procedures, subroutines and functions.

Software - The concept of stored programs. Principles and functions of operating systems. Network software.

Data – an introduction to data storage and retrieval concepts. Representation from analogue to digital, ASCII, image formats, multimedia and stored programs.

Data Handling: simple and compound data types: scalars, arrays and hashes; record structures (comma delimited, fixed format, tagged); file structures (sequential, random access, hashed); RDBMS; file structures for representation of text; sound; images.

The Internet: an introduction to the software and hardware technologies that underpin the Internet as a global network.

The World Wide Web and applications: the client-server paradigm in relation to Web browsers and server side systems and the MVC architectural pattern; introduction to relevant programming and scripting tools.

Ethics, Social and Legal Issue: ethical, social and legal issues raised by IS; challenges to the protection of individual privacy and intellectual property.

Security: key terms and critical concepts of information security; major security threats; tools and technology for safeguarding information resources

Teaching and Learning Methods: This module makes no assumption of previous learning or experience of digital technology but expects a basic awareness of the wide range of roles given to such technology in society today.

A combination of lectures, tutorials, workshops and student-centred learning is employed in this module. This combination is designed to suit traditional learning approaches as well as the wide range of modes of attendance and distance learning expected to develop in the future. Materials will be provided through a range of media, including Blackboard and the Internet.

The module combines knowledge based learning led by a lecture programme, tutorials with opportunities for discussion, groupwork and formative assessment, and practical workshops reinforcing knowledge of theory. Students are encouraged to keep up to date with current developments in Information Technology through the use of the Internet.

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops.

Independent learning includes hours engaged with essential reading, assignment preparation and completion etc.

Hours:
Contact time: 72 (3 hours per week)
Assimilation and development of knowledge : 148
Exam preparation : 40
Coursework preparation:40
Total study time: 300 hours

Part 3: Assessment	
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The assessment strategy will consist of 1 coursework assessment and one examination. The coursework assessment will be based on work covered in lectures and tutorials, with guidance offered to the students during tutorials. The examination will be based on the reading, lecture content and tutorial work.

Summative Assessment

Component A: Examination: 2 hours duration. Example: 40 multiple choice questions, 2 questions from 4 on syllabus and reading areas.

Component B: Design and implementation of a small system: Submission Second Semester: Problem-solving task, with system development task, using a variety of tools.

Formative Assessments

In-class discussions and essays with feedback

Online tests and quizzes.

First Sit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	50 %	Online Examination (2 hours) 24 hour window
Portfolio - Component B		50 %	Coursework based on teaching block 1 and 2
Resit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	50 %	Online Examination (2 hours) 24 hour window
Portfolio - Component B		50 %	Coursework based on teaching blocks 1 and 2

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
Show knowledge, understanding and appraisal of Information Technology; hardware, software, networking, data and systems development.	MO1
Identify key individuals and organisations in the computer industry, and key milestones and historical aspects of computer industry development.	MO2
Design and implement a basic web-based information system.	MO3
Demonstrate key transferable skills in problem evaluation, problem solving, application use and basic programming.	MO4
Understand the relationships between computer hardware and software, basic programming concepts and the need for and use of program design and development techniques.	MO5

Contact Hours	**Independent Study Hours:**	
	Independent study/self-guided study	228

	Total Independent Study Hours:	228
		4
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	72
	Total Scheduled Learning and Teaching Hours:	72
	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ufcfr3-30-1.html	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: Business Computing {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20 Business Computing {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2019-20 Business Computing {Foundation} [Feb][FT][GCET][4yrs] BSc (Hons) 2019-20 Business Computing {Foundation} [Oct][FT][GCET][4yrs] BSc (Hons) 2019-20