Module Specification

Foundational Technical Skills

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Contents

Part 1: Information

Module title: Foundational Technical Skills

Module code: UFCE8R-30-1

Level: Level 4

For implementation from: 2024-25

UWE credit rating: 30

ECTS credit rating: 15

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: None

Field: Computer Science and Creative Technologies

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module builds core programming and web development skills. Students first gain competencies in fundamental coding concepts like variables, data structures, functions, and object-oriented principles. The second semester focuses on client-side interfaces, server-side scripting, database access, and query languages to persist data. With practical labs, assignments, and projects, students develop strong foundations in programming and applying skills to build web applications.

Features: Not applicable

Educational aims: This module equips students with essential programming and web development skills. Students will gain competencies in programming, front-end web technologies and back-end database integration. By the end of the module, students will be able to build functional web applications.

Outline syllabus: This module spans two semesters, equipping students with essential programming skills in the first semester before progressing to focus on web development in the second semester. Students will gain in-depth competencies in programming during the first semester including variables, data types, control structures, functions, modules, api and object-oriented programming concepts.

During the second semester, students will focus on client-side web interfaces and back-end web technologies including database access and persistence by mastering database technologies such as MySQL along with SQL query language, server-side scripting such as PHP for business logic.

The teaching pedagogy will include practical lab exercises, hands-on programming assignments, and project work. This structured, step-by-step approach enables students to develop a strong foundation in both programming and web application development.

Part 3: Teaching and learning methods

Teaching and learning methods: This module makes no assumption of previous programming experienceg but expects a basic awareness of the wide range of digital technology in use 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 VLE 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.

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.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Demonstrate the ability to write, test, and debug programs by applying concepts including variables, data types, functions, and object-oriented programming.

MO2 Demonstrate competency in front-end web development by building responsive, accessible user interfaces with technologies such as HTML, CSS, JavaScript frameworks.

MO3 Demonstrate competency in back-end web development using technologies such as SQL, PHP, web application frameworks, and core server-side programming concepts.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ufcfr3-30-1.html

Part 4: Assessment

Assessment strategy: The assessment strategy will consist of 2 individual tasks.

The first individual task worth 50% will require students to submit a portfolio of programming exercises.

The second individual task worth 50% will require students to design and implement a small web database system.

The resit assessments will follow the same assessment profile as the main sit.

Assessment tasks:

Portfolio (First Sit)
Description: Students are required to prepare and submit an individual portfolio to demonstrate a basic understanding of programming concepts.
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1

Project (First Sit)
Description: Students will develop an end-to-end web application with a responsive front-end interfacing with a back-end database to perform CRUD operations. Students will demonstrate competency by showcasing functionality, UI design principles, server integration, query building skills and proper database normalization in the deployed application.
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO2, MO3

Portfolio (Resit)
Description: The resit project will follow the same assessment brief as the main sit.

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

Project (Resit)

Description: The resit portfolio will follow the same assessment brief as the main sit.

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Business Computing [Frenchay] BSc (Hons) 2024-25

Business Computing {Foundation} [Frenchay] BSc (Hons) 2023-24