



## **Module Specification**

### **Web Development and User Experience [TSI]**

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## Part 1: Information

**Module title:** Web Development and User Experience [TSI]

**Module code:** UFCE4W-30-2

**Level:** Level 5

**For implementation from:** 2023-24

**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:**

**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:** The module covers a set of technologies used for the development of the front-end and backend. It also includes UI/UX design principles, such as responsive design, accessibility, and usability testing. Students will work on a course project that involves creating a web application from scratch, showcasing their skills to potential employers. This course provides a well-rounded education in web development, encompassing both technical programming skills and design principles.

**Features:** Not applicable

**Educational aims:** The aim of the module is to provide students with skills in web programming and design principles, allowing them to create high-quality web applications and websites.

**Outline syllabus:** The module syllabus consists of two parts:

Part 1:

- Introduction to the Web. Basic concepts in WEB development. Types of Web Applications.
- Web application architecture. Server and client side. Frontend and Backend Development.
- Introduction to client-side development. Types of web pages, sites, layout and designs, Models of the logical organisation.
- Basic HTML and HML markup.
- CSS - Cascading Style Sheets.
- Adaptive design and cross-browser compatibility.
- JavaScript basics.
- Modern frontend development frameworks.
- Introduction to backend development.
- Technologies, programming languages and frameworks for backend development.
- Connecting and working with databases.
- Web application safety and security.

Part 2:

- UX Design. The business value of UX design. Elements of UX design. Interaction Design. Usability.
- Principles of Cognitive Psychology. Cognition. Attention/focus. Perception. Understanding, Memory/memorisation. User categories. Human errors and UX design.
- UX Design Methodologies.
- Visual Design Principles. Introduction to Information Architecture (IA).

- Nielsen's principles. Modern trends in UX design.
- Prototype testing methods.

### Part 3: Teaching and learning methods

**Teaching and learning methods:** Learning and teaching will be provided to students in two forms: lectures, practical classes and labs. During lectures, theoretical aspects of the course will be provided to students by the teaching staff. Lectures will be supported by presentation published and available to the students on e.tsi.lv under the module section.

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

**MO1** Select from a range of web programming languages and technologies and use them appropriately.

**MO2** Design and implement user interfaces that conform recognised standards of function and aesthetics, utilising principles of responsive design, accessibility, and usability testing

**MO3** Create a fully functional web application that meets specific requirements and showcase the results to an external audience

**MO4** Discuss and apply best practices in web security to protect web applications from common security threats.

**Hours to be allocated:** 300

**Contact hours:**

Independent study/self-guided study = 240 hours

Face-to-face learning = 160 hours

Total = 400

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/6745CC97-2948-48F3-D1EC-83EB700D5D02.html?lang=en&login=1) via the following link <https://rl.talis.com/3/uwe/lists/6745CC97-2948-48F3-D1EC-83EB700D5D02.html?lang=en&login=1>

## Part 4: Assessment

**Assessment strategy:** The assessment strategy for this module is designed to measure students' knowledge and skills in web programming, UI/UX design, and web application development. Formative assessments will include labs and practical assignments that will provide students with ongoing feedback to improve their skills throughout the module.

The summative assessments will include:

- 1) 2-hour in-class test covering web programming aspects,
- 2) 2-hour in-class test covering UI/UX aspects,
- 3) and project that will require students to design and develop a web application and present their results in a report and code of the application.

Resits will be the continuation of the main project.

### Assessment tasks:

#### In-class test (First Sit)

Description: This test focuses upon Web technologies. (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

#### In-class test (First Sit)

Description: This test covers UI/UX (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO2

#### Project (First Sit)

Description: Coursework dedicated to the design and development of the web application. The results are presented in the form of a report and code of the application (max 2750 words)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

### **In-class test (Resit)**

Description: This test will focus on Web technologies. (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

### **In-class test (Resit)**

Description: This test focuses on Covering UI/UX (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO2

### **Project (Resit)**

Description: Coursework dedicated to the design and development of the web application. The results are presented in the form of a report and code of the application (max 2750 words)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

## **Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Computer Science and Software Development {Double Degree} [Feb][PT][TSI][5yrs]  
BSc (Hons) 2021-22

Computer Science and Software Development {Double Degree} [Feb][FT][TSI][4yrs]  
BSc (Hons) 2021-22

Computer Science and Software Development {Double Degree} [Oct][FT][TSI][4yrs]  
BSc (Hons) 2021-22

Computer Science and Software Development {Double Degree} [Oct][PT][TSI][5yrs]  
BSc (Hons) 2021-22