



MODULE SPECIFICATION

Part 1: Information			
Module Title	Object-Oriented Programming [TSI]		
Module Code	UFCFPW-12-1	Level	Level 4
For implementation from	2021-22		
UWE Credit Rating	12	ECTS Credit Rating	6
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		
PSRB Requirements	None		

Part 2: Description
<p>Educational Aims: The aim of the module is to study the object-oriented programming principles and techniques (with C# and .Net Framework examples).</p> <p>Outline Syllabus: Classes and Encapsulation; Methods and Polymorphism; Inheritance and Abstraction; Interfaces; Instances and Instances' life cycle; Events and Delegates; Exceptions Handling; Properties and Data Binding; Using LINQ to Objects; Files I/O. Serialisation; NET Framework Overview; OO Design with UML; Design Patterns; Metadata and reflection; ASP.NET Overview;</p>

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ADO.NET Overview;
 OOP Languages Overview;
 Object Oriented Programming - What's Next?

Teaching and Learning Methods: Learning and teaching will be provided to students in two forms: lectures 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. Also, additional materials, like code examples, text books, publications on the internet, videos etc will be presented in e.tsi.lv.

During labs, each student receives an individual task to perform. Each practical task should be completed and uploaded to e.tsi.lv (under specific practical task element), it will be checked by the teaching staff and feedback will be provided. If positive feedback takes place students should defend practical assignment. The defence is happening orally and consists of discussion on theoretical issues which fits current practical assignment and assignment report. After the defence, a teaching staff puts the grade.

Integrated development environment (IDE) from Microsoft for .Net framework such as Visual Studio will be used for labs. In addition to learning activities during the face-to-face lessons, students must spend time outside the classroom on independent learning activities. These might include completing assignment tasks, independent reading, practising new skills on personal projects, watching informative videos, completing self-assessment test etc.

Part 3: Assessment

This module assessment is split into two components (A – Exam, B – Practical Assignments (Labs)):
 A - final 3-hour examination which will assess the students understanding of taught material that forms part of the learning outcomes but cannot easily be assessed through practical tasks.

B – Series of practical tasks, exploring different aspects of C# programming using the .NET framework. The assessment includes demonstration of the output plus a report for each lab.

First Sit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	50 %	Examination
Portfolio - Component B		50 %	A series of practical tasks, exploring different aspects of C# programming using the .NET framework. The assessment includes demonstration of the output plus a report for each lab.
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		50 %	A series of practical tasks, exploring different aspects of C# programming using the .NET framework. The assessment includes demonstration of the output plus a report for each lab.
Examination - Component A		50 %	Examination

Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:
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	Module Learning Outcomes		Reference
	Describe the principles of object-oriented programming		MO1
	Apply the concepts of data encapsulation, inheritance, and polymorphism to large-scale software		MO2
	Acquire the concepts of .Net Framework CIL (Common Intermediate Language) and metadata		MO3
	Design and develop object-oriented computer programs		MO4
	Formulate OOP problems as steps so as to be solved systematically		MO5
	Integrate robustness, reusability, and portability into large-scale software development		MO6
	Develop OO software with teamwork in mind		MO7
Contact Hours	Independent Study Hours:		
	Independent study/self-guided study		96
	Total Independent Study Hours:		96
	Scheduled Learning and Teaching Hours:		
	Face-to-face learning		64
	Total Scheduled Learning and Teaching Hours:		64
	Hours to be allocated		120
	Allocated Hours		160
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://rl.talis.com/3/uwe/lists/59B06D38-DF11-DEFB-9C91-A5074B26AEF8.html?lang=en-gb&login=1</p>		

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Computer Science and Software Development [Oct][FT][TSI][4yrs] BSc (Hons) 2020-21

Computer Science and Software Development [Oct][PT][TSI][5yrs] BSc (Hons) 2020-21 BSc (Hons) 2020-21

Computer Science and Software Development [Feb][FT][TSI][4yrs] BSc (Hons) 2020-21

Computer Science and Software Development [Feb][PT][TSI][5yrs] BSc (Hons) 2020-21 BSc (Hons) 2020-21