

Software Engineering Workshop

Module Information

2022.01, Approved

Summary Information

Module Code	4221COMP
Formal Module Title	Software Engineering Workshop
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Workshop	44

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To introduce the students to practical, team-based software design, development and evaluation. To develop the students' programming skills with a considerable increase in programme complexity. To become familiar with and utilise appropriate professional Software Engineering skills relating to project planning, team and client communication, design documentation, along with versioning and management of their software source and binaries.
------	---

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Plan and manage a team-based software development project, utilising appropriate incremental software development lifecycle methodologies.
MLO2	2	Design and document software system development using industry-standard techniques.
MLO3	3	Evaluate the quality of software design and implementation; refactor extant software.
MLO4	4	Become familiar with modern development ecosystems; such as integrated development environments and source code management repositories.

Module Content

Outline Syllabus	Group Planning and Management Software Development Lifecycles Object-Orientation Basics: Composite data types and design documentation standards Source code management and versioning Source documentation practices Test strategies; User/Acceptance, TDD and Unit Testing Debugging and state inspection Design Patterns Introduction Refactoring Profiling: evaluating the performance of executing code
Module Overview	This module is intended to give you a comprehensive introduction to applied software development on real-world problems, utilising team-working methods and industry-standard practices. In addition to the scheduled contact hours, teams will need to utilise private study time to research and develop solutions. Teams will have considerable supported study activities to assist them in this – significantly, regular (student-led) team meetings with module staff to update progress and gain assistance.
Additional Information	This module is intended to give students a comprehensive introduction to applied software development on real-world problems, utilising team-working methods and industry-standard practices. In addition to the scheduled contact hours, teams will need to utilise private study time to research and develop solutions. Teams will have considerable supported study activities to assist them in this – significantly, regular (student-led) team meetings with module staff to update progress and gain assistance. The module requires that students have received a basic introduction to programming in a higher-level programming language.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Group development of software	100	0	MLO1, MLO2, MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
David Lamb	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------

