Software Engineering Principles

Module Information

2022.01, Approved

Summary Information

Module Code	4004SEQR
Formal Module Title	Software Engineering Principles
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
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Oryx Universal College WLL

Learning Methods

Learning Method Type	Hours
Lecture	22
Tutorial	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks

SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	To introduce the students to the basic processes involved in the development of a software project.To make the students aware of the type of systems encountered in software engineering and the software engineer's role in systems development.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Apply and use formal notation within the context of software engineering and the software development process.
MLO2	2	Produce formal notations of a series of notation problems.
MLO3	3	Identify and apply software engineering principles and best practice within the software development process.
MLO4	4	Document the key stages of the software development lifecycle of a typical software domain, excluding the software code

Module Content

Outline Syllabus	What is Software Engineering? Systems Engineering Formal System Specification and Representation Fundamental Principle of software Development including Logics, Sets and FunctionsSoftware Dependability and Criticality Software Development Processes Requirements Engineering Software Design and Implementation Software Testing Software Project Management
Module Overview	
Additional Information	This module aims to introduce students to the fundamental principles of best practice in software engineering and system modelling, focusing on key topics that are central to all development processes and aspects concerned with the engineering of reliable distributed systems. The major issues of systems thinking and development are addressed utilizing software process models and relevant techniques of project management: The major activities and modelling techniques of modern software development are presented. The underlying formal concepts are described and used in the modelling and programming of system functions.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Discrete Math	40	0	MLO1, MLO2
Portfolio	SE Principles	60	0	MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Hoshang Kolivand	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings