

Problem Solving for Computing

Module Information

2022.01, Approved

Summary Information

Module Code	4511COMECA
Formal Module Title	Problem Solving for Computing
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
Education Centre of Australia Pty Ltd

Learning Methods

Learning Method Type	Hours
Online	44

Module Offering(s)

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

Aims and Outcomes

Aims	To develop skills in computational thinking that can be used to develop programs to solve subject specific problems.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Use computational thinking to design solutions to problems.
MLO2	2	Implement design solutions in a suitable programming language.
MLO3	3	Develop test plans.

Module Content

Outline Syllabus	Computational thinking – decomposition, pattern recognition, abstraction, algorithms Top-down design/successive refinement Pseudo-code and diagram techniques Practical exercises using compound control structure Practical exercises using methods/functions Solving problems with classes/objects Practical exercises using classes/objects Practical exercises on error handling Testing – test data, test cases, test plans, test strategies (unit, system) Practical exercises on testing
Module Overview	
Additional Information	The practical exercises will be related such that they lead to the development of a larger software implementation.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Design Model	40	0	MLO1
Report	Software Implementation	60	0	MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Denis Reilly	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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