

Summary Information

Module Code	6119COMP
Formal Module Title	Computer Science Applications
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Lecture	11
Practical	44

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	The aims of this module are to present the basic ideas of functional programming languages whilst demonstrating the main elements of good programming style; allowing the illustration of some uses and applications for functional programming
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Expound on the main features and advantages of a functional programming language
MLO2	2	Evaluate how algorithms are implemented in a functional programming language
MLO3	3	Analyse how functional programming techniques are used to solve problems

Module Content

Outline Syllabus	Classification of Programming Languages Distinctive Features of Functional Programming Languages The Lambda Calculus - syntax and semantics Higher-order functionsCurrying and UncurryingRecursion Type systemsNumerical Types and OperationsLists ProcessingOverview of Advanced features: e.g., modules; interactive programs; lazy evaluation; proving program properties.
Module Overview	
Additional Information	The module combines many of the concepts taught over the course of the Computer Science Programme such as complexity theory and algorithm design.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Problem Solution	90	0	MLO1, MLO3
Artefacts	Working Software	10	0	MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Somasundaram Ravindran	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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