Problem Solving for Computer Forensics

Module Information

2022.01, Approved

Summary Information

Module Code	4206COMP
Formal Module Title	Problem Solving for Computer Forensics
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
Lecture	11
Practical	22
Tutorial	11

Module Offering(s)

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

Aims and Outcomes

Aims	To enhance students software development and problem solving skillsTo develop problem decomposition and analysis skills To implement the problem solution in a relevant programming language

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Apply problem decomposition methodologies to analyse computer forensic problems.
MLO2	2	Identify solutions to simple computer forensics problems using a range of software development problem solving techniques.
MLO3	3	Apply programming/scripting techniques to computer forensics problems.
MLO4	4	Carry out structured evaluation and reflection of the developed solution.

Module Content

Outline Syllabus	Problem solving: flow diagrams, pseudocode, information representation, algorithms, encapsulation, abstraction, dividing big problems, combining small solutions, etc.Forensics case studies; searching for patterns in large data, searching for similarity, summarising information in a data set, organising information.Implementation and prototyping and testing and validation.Reflection.
Module Overview	In this module you will apply your understanding in two assessments. First, you will apply design and problem analysis techniques to a relevant case study scenario involving computer forensics. Second, you will translate such a design into a software solution. This will enhance your software development and problem solving skills, and develop your problem decomposition and analysis skills.
Additional Information	Students will apply their understanding in two assessments. First, they will apply design and problem analysis techniques to a relevant case study scenario involving computer forensics. Second, they will translate such a design into a software solution.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Coursework 1	60	0	MLO1, MLO2
Report	Coursework 2	40	0	MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Michael Mackay	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings