Advanced Topics in Computer Forensics

Module Information

2022.01, Approved

Summary Information

Module Code	7103COMP
Formal Module Title	Advanced Topics in Computer Forensics
Owning School	Computer Science and Mathematics
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Lecture	12
Seminar	12
Tutorial	12

Module Offering(s)

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

Aims and Outcomes

Aims	To develop advanced theoretical and practical research skills in computer forensics.To develop a critical appreciation of both the theoretical and practical issues in the field of computer forensics.To provide critical evaluation of research methods in the development of new computer forensics methodologies, tools, techniques and applications.To provide students with an opportunity to practise research skills, such as scientific writing, presentations, and proposal writing.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Conduct research relating to Computer Forensics.
MLO2	2	Display advanced knowledge of one or more issues within Computer Forensics.
MLO3	3	Demonstrate expertise in applying knowledge to Computer Forensics problems.
MLO4	4	Demonstrate skills in the communication of research findings.

Module Content

Outline Syllabus	Topics will reflect the current research in computer forensics, including that being undertaken within the school, and may include (but are not limited to):- Advanced hard drive and storage media analysis,- Issues in current practice and evidence handling,- Operating system (Windows/UNIX) advanced analysis techniques,- Advanced file analysis approaches,- Network forensics,- Mobile device (e.g. mobile phone or embedded systems) computer forensics,- Data hiding and hostile code,- Encryption and forensics,- Computer forensics in virtual environments (e.g. virtual machines, the cloud),- Incident response and live computer forensic analysis,- Combining computer forensics investigations with other evidentiary material,- Automation of digital forensic procedures,- Database and big data forensics,- Computer forensics approaches for social networks,- Forensic investigation of peer-to-peer applications and networks.
Module Overview	The focus of the module is on examining current research issues and agendas within Computer Forensics. It aims to: develop advanced theoretical and practical research skills in computer forensics cultivate a critical appreciation of both the theoretical and practical issues in the field of computer forensics provide critical evaluation of research methods in the development of new computer forensics methodologies, tools, techniques and applications accomodate you with an opportunity to practise research skills, such as scientific writing, presentations, and proposal writing
Additional Information	The focus of the module is on examining current research issues and agendas withinComputer Forensics. Students are encouraged to develop their research skills, through conducting literature investigations and proposing ideas in a seminar setting.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping

Report	Research paper	100	0	MLO1, MLO2, MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Aine Mac Dermott	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings