

Liverpool John Moores University

Title: ETHICAL HACKING
Status: Definitive
Code: **6117COMP** (121288)
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
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Academic Level: FHEQ6
Credit Value: 20
Total Delivered Hours: 55
Total Learning Hours: 200
Private Study: 145

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Practical	22
Tutorial	11

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Report on hacking tools	40	
Report	AS2	Hacking and defence scenario	60	

Aims

To gain a significant understanding of various security vulnerabilities in and cyber threats to computer systems/applications as well as the importance of cyber security.
To assess critically a variety of ethical hacking tools and techniques for the protection and evaluation of computer systems and applications.
To promote the use of appropriate security techniques to solve cyber security

problems.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify ethical, legal and social issues around the use of hacking.
- 2 Provide creative solutions in relation to practical security problems
- 3 Analyse methods of ethical hacking for the evaluation of networked information systems
- 4 Critically review existing research-based defence solutions

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Report on Hacking Tools	1	2
Hacking and Defence Scenario	3	4

Outline Syllabus

Ethical hacking: Ethical hacking fundamentals; security vulnerabilities; attack foot printing; attack scanning techniques; system hacking methods; network and device hacking techniques; application and data hacking methods; ethical hacking planning; and ethical hacking reporting and responding.

Ethical, Legal and Social: UK, EU and International Cybercrimes laws and regulations.

Learning Activities

Include attending lectures, practical sessions and tutorials, as well as reading online resources

Notes

The spectacular growth of the Internet has spawned a great demand for secure computer systems. Ethical hacking can help to assess the cyber security defence of computer systems. Intrusion detection and firewalls provide additional layers of defence for the detection and prevention of cyber attacks on computer systems. This module examines various cyber security issues and solutions within these areas.