

Ethical Hacking

Module Information

2022.01, Approved

Summary Information

Module Code	6217COMP
Formal Module Title	Ethical Hacking
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	22
Practical	22

Module Offering(s)

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

Aims and Outcomes

Aims	To gain a significant understanding of various security vulnerabilities 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.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Identify ethical, legal, and social issues around the use of hacking tools
MLO2	2	Critically review existing research-based defence solutions
MLO3	3	Plan and deploy appropriate solutions in relation to practical network security problems
MLO4	4	Critically analyse ethical hacking methods for the evaluation of network security

Module Content

Outline Syllabus	Ethical hacking: fundamentals and concepts Open Source Intelligence Security vulnerabilities and detection Attack foot printing Attack scanning techniques System hacking methods Network and device hacking techniques Web application vulnerabilities and attacks Exploit development and defence Ethical hacking reporting Responding and security solutions Ethical, Legal and Social: UK, EU and International Cybercrimes laws and regulations.
Module Overview	The growth of the Internet has spawned a great demand for secure computer systems. Ethical hacking provides the concept for finding vulnerabilities before real attackers do so that vulnerabilities can be fixed and associated risks mitigated. It also helps to test the cyber security defence of computer systems. In this module you will examine various ethical hacking concepts, tools, and techniques that provide solutions to fix identified threats
Additional Information	The growth of the Internet has spawned a great demand for secure computer systems. Ethical hacking provides the concept for finding vulnerabilities before real attackers do in other for these vulnerabilities to be fixed and associated risks mitigated. It also helps to test the cyber security defence of computer systems. This module examines various ethical hacking concepts, tools, techniques and provides solution to fix identified threats.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Review ethical hacking tools	40	0	MLO1, MLO2
Report	Simulated attack and defence	60	0	MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Alex Akinbi	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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