

Liverpool John Moores University

Title: SECURE SYSTEMS
Status: Definitive
Code: **7142COMP** (126790)
Version Start Date: 01-08-2021

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

Team	Leader
Nathan Shone	Y
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Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 33
Total Learning Hours: 200 **Private Study:** 167

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	11
Practical	22

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	A report on a secure systems task	40	
Artefacts	AS2	A report on a secure systems implementation task	60	

Aims

*To familiarise students with common system security techniques, tools and methods that can be utilised during the design, deployment and maintenance of systems.
To allow students to develop new advanced security skills and to combine their existing and new skills in a practical context.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Display critical awareness of the relationship between theoretical and practical security concepts and their implementation.
- 2 Apply technical and conceptual skills to the task of securing a complex computer system
- 3 Critically evaluate practical configuration, diagnostic and problem solving techniques for security complex computer systems

Learning Outcomes of Assessments

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

Secure system report	1	
Secure system implementation	2	3

Outline Syllabus

Common concepts of securing systems
Infrastructure design & topologies
Secure Networking
Application security
Secure administration & defence
Event monitoring and analysis
Access control and authentication
Securely implementing common servers
System configuration & automation
Patching and vulnerability management

Learning Activities

Students will participate in lectures and practical lab sessions to obtain both theoretical and practical knowledge. The theoretical aspects of the module will largely build on existing knowledge, but recapping and refocussing on its application to real-world systems. The practical aspects will involve hands-on system configuration, automation and familiarisation with industry tools. The assessment will also include a practical element that will also contribute as a learning activity.

Notes

This module provides an opportunity for students to gain both theoretical and practical knowledge and experience in creating and managing secure systems.