Liverpool John Moores University

Title:	ADVANCED TOPICS IN NETWORK SECURITY
Status:	Definitive
Code:	**7041COMP** (103300)
Version Start Date:	01-08-2011
Owning School/Faculty:	Computing and Mathematical Sciences
Teaching School/Faculty:	Computing and Mathematical Sciences

Team	Leader
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Academic Level:	FHEQ7	**Credit Value:**	15.00	**Total Delivered Hours:**	24.00
Total Learning Hours:	150	**Private Study:**	126		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	3.000
Seminar	9.000
Tutorial	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Produce a research paper relating to an advanced network security topic.	100.0	

Aims

To provide students with an opportunity to experience cutting edge development in Network Security by studying recent academic research in the area.
To provide students with an opportunity to practise research skills, such as scientific writing, presentations, and proposal writing.

Learning Outcomes

After completing the module the student should be able to:

1 Conduct research relating to Network Security.
2 Display advanced knowledge of one or more issues within Network Security.
3 Demonstrate expertise in applying knowledge to Network Security problems.
4 Demonstrate skills in the communication of research findings.

Learning Outcomes of Assessments

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

Research paper	1	2	3	4

Outline Syllabus

Topics will reflect the current research in network security and may include (but are not limited to):
-Malware Containment
-Formal Specifications and Logics
-Denial of Service protection
-Ubiquitous/Pervasive Computing Security
-Cryptography
-Anonymity and Privacy Enhancing Technologies
-Access Controls
-Systems Integrity
-Sensor Network Security
-System-of-systems Security
-Digital Rights Management

Learning Activities

A small number of lectures at the beginning will make way for tutorial and seminar sessions in later weeks. Students will do independent research work and use the tutorial / seminar sessions to progress their ideas within the group setting.

References

Course Material	Journal / Article
Author	
Publishing Year	
Title	Current research papers from leading journals and conferences in network security, many of which are

	available via the LJMU E-Journals/FindIt database, e.g. Journal of Computer Security,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	IEEE Security and Privacy,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	IEEE Transactions on Dependable and Secure Computing,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	ACM Transactions on Information and System Security,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	ACM Conference on Computer and Communications Security,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	

Title	IEEE Symposium on Security and Privacy,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	European Symposium on Research in Computer Security,
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Journal / Article
Author	
Publishing Year	
Title	International Cryptology Conference.
Subtitle	
Edition	
Publisher	
ISBN	

Notes

The focus of the module is on examining current research issues and agendas within Network Security.