

Module code	NISM_PCOM7E	NQF level	7
Credit value	20	Study duration	12 weeks

Network and Information Security Management

Module description

This module introduces students to the underpinning concepts of Computer Networks and the skills of Information Security Management. This includes an introduction to network security fundamentals and information security governance principles. It will be based on mapping information security management roles onto a number of security models. The module describes the security management and protection issues involving business resources, risks, monitoring as well as business continuity strategies. It will also discuss common diagnostic and monitoring tools utilised as part of a Network and Information Security practice such as nessus, snort, syslog and ELK. Students will be introduced to the techniques in an engaging format, using a mixture of group work and individual activities.

This module aims to:

- Provide students with:
 - an understanding of the fundamentals of computer networks and security
 - an understanding of the principles of information security management
 - an understanding of the use and benefits of various monitoring and logging tools
 - an understanding of how to create and use security vulnerability and assessment tools, including relevant programming techniques
 - an understanding of future network architectures and information security management
 - the opportunity to reflect on and evaluate their personal development
 - the ability to present critical arguments for specific actions or outcomes to a diverse audience

Learning outcomes

On completion of this module, students will be able to:

- identify and analyse security risks and vulnerabilities in IT network systems and determine appropriate methodologies, tools and techniques to manage and/or solve them
- design and critically appraise computer programs and systems to produce solutions that help manage and audit risk and security issues
- gather and synthesise information from multiple sources (including internet security alerts and warning sites) to aid in the systematic analysis of security breaches and issues
- articulate the legal, social, ethical and professional issues faced by information security professionals

Syllabus

- Computer Networking and Security Fundamentals
- What is Information Security Management (ISM)? The role of the IS Manager: ISM, Networks and Security Model
- Logging, auditing, vulnerability and analysis tools
- Creating an assessment report and recommendations
- Future Internet Architectures and Security Models

Learning and teaching methods

The module will be delivered through the provision of specified reading materials on the virtual learning platform, which shall be supported by specified online discussion forums and lecturecasts. The flexible and participative approach of the module will develop a collaborative research inquiry in the advancement of computing, enabling them to accelerate in their chosen career.

Students will demonstrate their ability and strengths through evidence and reflections by maintaining an e-portfolio. The e-portfolio will also act as a means for assessment on evidence of personal growth and CPD.

Synchronous sessions will give students the opportunity to interact with fellow students and for tutor contact. The sessions will include live coding sessions to help students contextualise their knowledge. These synchronous sessions will be recorded in order to ensure that all students can access the material in their own time.

At pre-arranged days and agreed times during the module (usually weekly, prior to a synchronous session), the module tutor will be available for a drop in telephone or preparatory learning liaison session. This is to give students the opportunity to ask specific and general questions relating to the week's learning opportunities and enable them to contextualise their learning.

For team activities in this module, students will be grouped according to time zones to ensure team members can communicate easily with each other. Details on the process for team activities and peer assessment will be made available to students at the outset of the module.

Description of unit of assessment	Length/Duration	Submission date	Weighting
Development team project: design document	2 pages (1,000 words equivalent)	Unit 6	20%
Development team project: executive summary	2,000 words	Unit 11	40%
Individual module e-portfolio	2,500 words equivalent	Unit 12	40%