



**NEW START4U CIC**  
024 7767 1470  
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12-14 Riley Square,  
Coventry CV2 1LX, UK

# MSc Cyber Security (Part-Time)

**London Campus**

**Level of study: Postgraduate**

**Mode of study: Part-time**

**Duration: 2 years (15 weekends)**

## Overview

The issue of cyber security continues to be a major issue for both individuals and large corporations. It has been reported by the Cyber Security Breaches Survey 2018 that over four in ten businesses (43%) and two in ten charities (19%) experienced a cyber security breach or attack in the last 12 months.

For businesses it is no longer a question of if a cyber-attack will occur but rather when, and as such the demand for qualified IT security professionals has risen exponentially. Northumbria University's part-time MSc Cyber Security has been designed to give you the skills to meet this increased demand, including how to handle security incidents, identify new and existing threats, and determining methods to minimise them.

## Key facts

- . Part-time Masters degree based in Central London
- . Continue working while you study with lectures delivered on 15 weekends spread throughout the 2 year course
- . Build a critical understanding of governance and assurance, along with technology risk practices
- . Learn how to handle security incidents, identify new and existing threats and determine methods to minimise them
- . Undergraduate degree not essential for entry
- . Also available as a full-time programme

## Course information

**Level of study: Postgraduate**

**Fees: To find out about current fees and student finance contact us**

**Entry requirements: 2:2 or above undergraduate degree from a recognised university, typically in a computing-related discipline Professional qualifications that are equivalent to an honours degree or work experience may also be acceptable .**

**Mode of study: Part-time**

**Duration: 2 years (15 weekends)**

**Assessment methods: Coursework and exams**



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**Scholarships or bursaries: unavailable**

**Student finance: available**

**Payment plan: available**

**Starts: Jan, Apr, Jul, Oct,**

### **About this course:**

#### **What will I study?**

Incidents of cyber-crime have increased in the UK by 48% from 2013-14 according to PwC's Global State of Information Security Survey 2015, costing the UK up to £27bn a year. While their 2016 survey has reported a significant shift in the way organisations are taking action, including their willingness to invest in security. Our MSc Cyber Security will teach you how to handle security incidents, identify new and existing threats and determine methods to minimise them. We will also provide an in-depth coverage of the fundamental concepts, principles and technologies for network security. Going beyond just theoretical theory, you will be given a practical understanding of governance and assurance, along with technology risk practices.

This programme is also available full-time, or as MSc Cyber Security with Advanced Practice which includes an internship, consultancy project or research project.

#### **How will I be taught and assessed?**

Our MSc Cyber Security is designed to allow you to fit your studies around your working life and is assessed through modular assignments, exams and a final dissertation. All taught lectures are delivered across 15 of weekends spread throughout the 2 year programme. This is based on 2 10am-4pm sessions over 15 weekends, you will also have an additional 6-hours of contact time through a workshop. You will also have 6-hours of contact time with your tutor as part of your final project, this can be on campus or online.

You will also be expected to engage in independent study, around 3-4 hours per week on average over the 2 years. This will be supported by your module tutor and will consist of pre-class reading preparation, research, assessment preparation, development and writing as well as skills development and online tests and quizzes. Each module builds upon your understanding of information governance and assurance, along with technology risk management practices. You will study with a diverse group like-minded IT professionals, and will be able to trial new approaches and processes in a safe environment, working on real world scenarios and case studies.

You will be assessed via a range of assessment methods including exams, assignments, presentations and group work. Technology Enhanced Learning (TEL) is embedded throughout the course with tools such as the 'Blackboard' eLearning Portal and electronic reading lists that will guide your preparation for seminars and independent research.



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We offer extensive student support in and outside of the classroom with a dedicated student support team based in London.

### **Careers and further study**

Cyber security has become an increasingly recurring issue for businesses, governments and the public. Recent hacks include the US presidential election, Yahoo's 'biggest data breach in history' and the continual release of information by

WikiLeaks, the financial cost to business is estimated to be as high as \$6 trillion by 2021. Given this, business and governments alike have significantly invested in their cyber security systems.

With all this investment, there are a plethora of career options following completion of this course, typical roles include:

- . Threat management & forensics
- . Risk analytics & management
- . Policy makers & Strategists
- . Operations & security management
- . Engineering, Architecture & Design
- . Chief Technology Officer

### **Entry requirements**

Applicants should have:

Standard entry requirements

- . Minimum 2:2 or above from a recognised university in a relevant field (IT/Computer Science/related field) or
- . Professional qualifications that are equivalent to an honours degree

Non-standard entry requirements

Relevant qualifications and/or work experience will be taken into consideration where the applicant has the judged

potential to benefit from the programme. Requests will be considered on an individual basis by the Programme Leader and relevant module tutors where appropriate.

If you do not have the required technical expertise from either previous study, professional qualifications or work experience, you may find the MSc Cyber Security Technology more suitable.

### **Modules**



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All modules on this course are core.

### **Information Governance and Security (20 credits)**

The aim of this module is to critically explore the governance, management and security principles that underpin the management of an organisation's information assets. It will provide you with a comprehensive and in-depth knowledge and understanding of the key concepts, theories, standards and frameworks of information governance, information management and information security. Through the critical analysis of these principles and tools you will develop a solid practical foundation on which to evaluate a range of organisations' approaches to information.

### **Network Security (20 credits)**

The main objective of this module is to provide an in-depth coverage of the fundamental concepts, principles and technologies for network security. This module will provide students with a theoretical and practical understanding on two important aspects related to security namely, data security and network security. The module will cover a number of topics including cryptography, classical systems, IP protocol security, private and public-key cryptography, cryptographic protocols, hash functions, authentication, signature schemes, email and web security, viruses, and firewalls.

### **Wireless Networks (20 credits)**

This module is designed to be suitable for a variety of networking professional roles including those wishing to gain a deeper understanding of 802.11 protocols, security and enterprise deployment. You will study enterprise wireless deployment elements and methodologies. Basic RF characteristics for mobile systems. 802.11 protocol operation and technologies wireless security issues and attack vulnerabilities.

### **Information Assurance and Risk Management (20 credits)**

This module will provide students in-depth knowledge of the processes used in assuring the security of information during use, sharing, storage, transmission and disposal. It will cover the protection of the integrity, authenticity, availability and confidentiality of all classes of information. The module is designed to provide a comprehensive framework for ensuring the resilience of business activities during threats and disruptive events thus enabling the assessment of potential risks to the business which could result from disasters or emergency situations.

### **Ethical Hacking for Cyber Security (20 credits)**

This module will enable learners to develop a deep understanding of both theoretical and practical aspects of Ethical Hacking. An essential part of a modern organisation's e-security includes rigorous testing and analysis to determine vulnerabilities. Carrying out such work requires a special skill set, which crosses, legal issues, psychology, computer networks along with detailed understanding of system vulnerabilities and exploits. Additionally, you will be exposed to a collection of industry standard hacking tools and will learn how to apply these in an ethical manner to determine system vulnerabilities.

### **Research Methods and Project Management (20 credits)**



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Throughout the world of science, engineering, technology and business, the ability to pursue research is seen as a requisite for continued career progression in the appropriate subject discipline. This module introduces students to the nature of research and the processes involved in carrying out research. General research approaches and methods for research will be introduced including literature searching, evaluation and reviewing. This general introduction will be followed by the inclusion of topics specifically designed to meet the requirements of the students' programme of study.

### **MSc Computer Science and Digital Technologies Project (60 credits)**

The aim of this module is to enable you to undertake a substantial academic research project at Masters Level and present the results from this work in both written and oral forms. Your project itself will be a major piece of independent and original research centred at the forefront of your programme discipline within the wider sphere of the computer science and digital technologies field.

Please note that your tuition fees do not include the cost of course books that you may choose to purchase, stationery, printing and photocopying, accommodation, living expenses, travel or any other extracurricular activities. As a London Campus student, you will have full access to our online digital library with over 400,000 e-books and 50,000 electronic journals.

The modules you will study do not require you to purchase additional textbooks although we recommend you allow an additional £200-250 for the duration of your studies should you choose to purchase any additional reading materials.