



MSc Cyber Security

London Campus

Level of study: Postgraduate

Mode of study: Full-time

Duration: 1 year

Response to Covid-19: Our focus is on providing a safe and welcoming learning environment and ensuring continued access to learning.

As a result of the coronavirus (Covid-19) pandemic and resulting social distancing requirements, we are intending to teach this course using a mix of on-campus and online learning activities. We continue to be guided by the Government

<https://london.northumbria.ac.uk/course/msc-cyber-security/>

Content published from webpage – for links and further info visit the website

Course information correct as of

17th October 2021 15:05:41

to ensure our campus is Covid-secure. More information about our [response to Covid-19 and FAQs](#) are available here.

All information is accurate at the time of sharing. Courses starting in 2021 are offered as a mix of face to face and online learning. We continue to monitor government and local authority guidance in relation to Covid-19 and we are ready and able to flex accordingly to ensure the health and safety of our students and staff. Contact time is subject to increase or decrease in line with additional restrictions imposed by the government or the University in the interest of maintaining the health and safety and wellbeing of students, staff, and visitors, potentially to a full online offer, should further restrictions be deemed necessary in future. Our online activity will be delivered through Blackboard Ultra, enabling collaboration, connection and engagement with materials and people.

Overview

With the dramatic increase in high-profile cyber security incidents reported in the media, the demand for highly skilled security professionals is growing significantly as businesses across the globe seek to protect their networks and data. Our MSc Cyber Security provides you with a critical understanding of information governance and assurance, combined with technology risk management practices.

In addition to developing the key skills for handling security incidents, you will learn how to identify new and existing threats and the methods by which to reduce them.

Key facts

- Develop key skills which are highly in demand by employers
- Enhance your ability to handle and minimise security threats and incidents
- Provisional certification in Cyber Security from the NCSC (National Cyber Security Centre), placing us in an elite group of postgraduate providers to have achieved this standard
- Northumbria University is recognised as a Centre of Excellence in Cyber Security Research (ACEs-CSR) by the National Cyber Security Centre
- Also available as [MSc Cyber Security with Advanced Practice](#)
- Also available as a [part-time programme](#)
- Upon completion of your programme, you will be eligible for the QA Professional Pathways programmes which will enable you to further develop your skills with one of the UK's largest providers of IT and project management training

Course information

Level of study: Postgraduate

Fee (UK/Home): £8,400

Fee (International): £16,000

Entry requirements: 2:2 honours degree, or equivalent from a recognised university in a related subject IELTS 6.5, with no single element below 5.5 or equivalent .

English language requirements: IELTS 6.5, with no single element below 5.5, or equivalent

Mode of study:

Full-time

Duration: 1 year

Assessment methods: Coursework and exams

Scholarships or bursaries: available

Student finance: available

Payment plan: available

Starts: Jan, May, Sep,

About this course:

What will I study?

The programme aims to provide you with advanced and specialist knowledge and skills in the field of cyber security. Your MSc Cyber Security will cover topics such as

- Information Governance and Security
- Information Assurance and Risk Management
- Wireless Networks and Security
- Network Security
- Ethical Hacking for Cyber Security.

You will also develop your research and project management skills, in particular, to support your preparation for your MSc project. In your final semester, you will complete a major individual project, where you will receive one-to-one tuition and supervision from a relevant academic supervisor.

This project will provide you with a platform to undertake a substantial piece of individual research. To do this you will utilise appropriate advanced research, critical evaluation and synthesis techniques.

Our MSc Cyber Security has been awarded provisional **certification in Cyber Security from the NCSC (National Cyber Security Centre)**. This places us in an elite group of postgraduate providers which have achieved this standard.

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

Ultimately, as a graduate of MSc Cyber Security you will be able to:

- Demonstrate complex, specialised knowledge and skills and appreciate innovations, advances and major issues in the field of cyber security
- Deal with complex issues both creatively and systematically, and show originality in tackling and solving problems
- Work both individually and as a member of a team, recognising different team roles and multi-cultural environmental issues
- Communicate balanced judgements effectively (in writing and verbally) at the appropriate business and technical

level with users, management, customers and technical specialists, justifying work in the context of wider theories and practice, including when considering incomplete or ambiguous data

- Critically understand computing systems in relation to cyber security issues
- Act in a professional and ethical manner in the development and use of computing systems
- Satisfy the educational requirements of the BCS, The Chartered Institute for IT for professional membership

How will I be taught and assessed?

Throughout the course, you will be able to trial new approaches and processes in a safe environment, working on real-life scenarios and case studies.

- Teaching is delivered through tutorials, lectures and practicals, totalling between **12-13 hours per week**.
- You will also be expected to engage in independent study, around **29 hours per week**.
- **Assessment** includes a mix of coursework and exams.
- Taught by **experienced lecturers and academics** who use their industry experience to demonstrate how theories translate into real-life situations.
- **Technology-enhanced** learning is embedded throughout the course to guide your preparation for seminars and independent research
- Benefit from **weekly academic support sessions** designed to build your ability and confidence as an academic learner
- You will be assigned a **guidance tutor** at induction who you will meet with regularly during your studies

Careers and further study

For those with high career aspirations, this programme can give you an extra edge in today's competitive job market. Graduates from the programme will be equipped to work in a variety of careers in the IT industry or to progress to academic or research-orientated careers. Job roles, including roles in leadership and management, could include working in, for example, software engineering, network design and management, network security, artificial intelligence or IT consultancy.

This programme will prepare you to meet the educational requirements of the BCS, The Chartered Institute for IT for the purposes of fully meeting the further learning academic requirement for registration as a Chartered IT Professional.

Upon successfully completing your course, you may undertake further professional development and training through Professional Pathways programmes. This additional training is offered to our graduates for free, from our partner, QA and provides you with an excellent opportunity to undertake professional training at the end of your Masters from one of the UK's leading corporate training providers, further enhancing your professional development and employability skills. [Find out more about Professional Pathways and your eligibility.](#)

Related reading

From your Programme Leader, [Hamid Jahankhani](#):

- [What is Cyber Crime and How Can Cyber Criminology Help Reduce Victimisation?](#)

- [Fighting Cyber-Crime](#)

Cyber Security reading:

- [Threats to Information Security 2019](#)
- [The State of Cyber Security](#)
- [11th International Conference on Global Security, Safety and Sustainability](#)
- [High Flying Jobs in Cyber Security](#)
- [The 11%; Where are the Women in Cyber Security?](#)
- [Popular Course: Cyber Security](#)

[Enquire now](#)

Entry requirements

Academic requirements

- Minimum 2:2 (second class) honours degree or equivalent from a recognised university in a related subject (IT/Computer Science/related field)

If you don't meet the academic requirements

Applicants with non-standard prior learning and or relevant work experience and training are encouraged to apply. A CV (curriculum vitae) made up of prior work experience and training would need to be submitted for consideration by our faculty alongside the standard application.

Please visit our [entry requirements](#) page for country-specific qualifications.

English language requirements

Students require IELTS 6.5 (or above) with no single element below 5.5 or equivalent.

If you have IELTS 5.5 – 6.0, you may be eligible to join our [Pre-Sessional English](#) before starting this programme.

[Enquire now](#)

Modules

All modules on this course are core and 20 credits unless otherwise stated.

Information Governance and Security

In this module, you will learn about the information governance and cyber security principles that underpin the management of an organisation's information assets. You will critically analyse the key concepts, theories, standards and frameworks of information governance and security, including risk management.

It will enable you to evaluate an organisation's current approach to information governance and cyber security. You will

have the expertise to advise on the design and implementation of an appropriate strategy for managing an organisation's information (ensuring all assets meet legal, regulatory, organisational and/or societal needs for information governance and security).

Network Security

The main objective of this module is to provide you with in-depth coverage of the fundamental concepts, principles and technologies for network security. This module will provide you with a theoretical and practical understanding of 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. The concepts introduced in lectures are reinforced with the help of extensive hands-on laboratory workshops.

You will also have the opportunity to develop practical networking skills by using Cisco IOS, the configuration of firewalls, switches and routers. You will also explore the wider impact of security via a consideration of related legal, ethical and social issues.

Wireless Networks and Security

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. Additionally, it is suitable for wireless network administrators and support or design staff requiring a greater understanding of the new technologies and applications of modern converged networks and delegates seeking Certified Wireless Network Associate (or similar) certification. You will study the following areas:

- Enterprise wireless deployment elements and methodologies
- Basic RF characteristics for mobile systems
- 11 protocol operation and technologies
- Wireless security issues and attack vulnerabilities

Information Assurance and Risk Management

This module will provide you with an 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.

You will develop an in-depth understanding of the different types of business interruptions – man-made, natural disasters and technology failures – and the potential damage/revenue losses that can result from them. It is crucial to perform regular disaster recovery testing exercises in order to prove that organisations can recover from a catastrophic

loss of data and facilities.

Ethical Hacking for Cyber Security

This module will enable you to develop a deep understanding of both theoretical and practical aspects of Ethical Hacking. An essential part of a modern organisation's e-security. The module includes 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

In this module you will learn about research and the processes involved in carrying out research and project management, and you will apply them to develop a master's project proposal. This will include research approaches and methods of research, including literature searching, evaluation and review and project management tools and techniques. You will also consider relevant legal, ethical and social issues and good professional practice.

By the end of this module you will have constructed a project proposal which can be executed in a master's project. This will contain a brief literature review justifying a research question, establish aims and objectives, and provide a plan of execution, using tools and techniques in project management, including an outline of deliverables (both artefacts and products).

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.

[Enquire now](#)

Fees and finance

Tuition fees 2021/22

- **UK/Home students:** £8,400
- **International students:** £16,000

Tuition fees 2022/23

- **UK/Home students:** £9,075
- **International students:** £16,500

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 Northumbria University 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 £100 for the duration of your studies should you choose to purchase any additional reading materials.

What's included in your tuition fees?

Your tuition fees cover far more than your time in class with our expert academics, it covers the cost of providing you with excellent services and student experience.

- Contact time in class – typically in lectures, seminars and tutorials
- Access to facilities, including computers, on-campus Wi-Fi, printers, vending machines, quiet study spaces
- The support of our Careers & Employment Service who help you to become more employable, secure placements and run workshops
- Academic support – our ACE Team run multiple sessions on academic writing, presenting, exam techniques throughout the semester, as well as 1-2-1 appointments and drop-in sessions
- Student support services such as our Ask4Help Service. Find out more about the services available to you on our [Student Support](#) page
- Access to online resources, including 24/7 Library with over 400,000 e-books and 50,000 electronic journals.

Scholarships and bursaries for international students

If you are an international student and choose to study the full-time programme, you will be eligible for either our programme bursary or a country bursary, whichever is greater. High performing students may be eligible for an academic scholarship in addition.

Depending on the country you are from, you may be eligible for one of our country bursaries and/scholarships to help finance your studies.

All of our scholarships and bursaries are automatically applied when we process your application and our team will be able to confirm your eligibility.

[Scholarships and bursaries](#)

Payment plans for self-funded students

If you need to spread the cost of your tuition, you may be eligible for our payment plan.

[Payment plans](#)

Government Loan for Masters study

If you are a UK or Home student, you may be eligible for a postgraduate loan of up to £10,000+ from the UK Government. Click [here](#) to find out more about the loan and whether you are eligible to receive it.

[Postgraduate Loan](#)

How to apply or find out more

How to find out more

Enquire now to find out more information about the course, studying with us, the application process, and to ask any other questions you may have.

[Enquire now](#)

How to apply

Once you're ready to apply, you can apply online to study the MSc Cyber Security. This method allows you to upload your supporting documents at the time of application and automatically receive your student application number.

[Apply online](#)

We strongly recommend that you submit your application as early as possible to allow you to complete all of the preparations needed to study your programme. After receiving an offer it can take time to arrange your finances and apply for your visa (if required) and it is important that you arrive in good time to enrol onto your course. Please refer to the [Dates and Fees](#) page.

If you are unable to apply online, then you can download a PDF application form and email it to london.admissions@northumbria.ac.uk.

[International students application form](#) [UK/Home students application form](#)

Supporting documents

For us to assess your application in a timely manner, it is important that you provide us with the following documents:

- Fully completed application form
- A personal email address must be included on the application form
- Transcripts and/or certificates (including a certified translation if not in English)
- Passport – a copy of personal details page
- Proof of financial sponsorship if applicable
- Reference
- Confirmation of immigration history including copies of previous and current visas if applicable

You can check more information on [how to apply here](#), including guidelines for the application forms.