MSc Cyber Security

POSTGRADUATE | ONLINE | BLENDED

TABLE OF CONTENTS

Arden University has three decades of experience providing higher education, and we've helped more than 50,000 students globally gain the qualifications they need to succeed. According to our 2021 graduate survey, we have a 95% student satisfaction rating, and 9 out of 10 Arden students believe studying with us has helped them transform their careers.

MSc Cyber Security

POSTGRADUATE ONLINE BLENDED

You can visit the Arden University website page for this course here.

Are you interested in advancing your career in a high-demand and well-paying field? Our MSc Cyber Security programme prepares you for lucrative roles in cyber security. The programme covers everything from core concepts to vulnerability assessment. You'll learn to design secure systems, become an ethical hacker, handle digital forensics, and much more. Additionally, you'll gain expertise in cloud, web, and mobile security, and become skilled at recognising major threats. We emphasise hands-on learning, giving you the opportunity to apply security techniques to test against real attacks and suggest improvements.

Course at a glance

- Aligned to the NCSC academic framework.
- Gain the knowledge and skills to excel as a cyber security expert in countless industries.
- Identify and resolve real-world cyber security issues encountered by businesses today.
- Build a portfolio demonstrating your industry-standard cyber security capabilities to future employers.
- Graduate with the competence to fill emerging skills gaps in this burgeoning field.

Key facts

Location: Online, Blended
Start dates: Every 3 months
Part time: 1 year+
Full time: 1 year

Contact us

If you'd like to get in touch to find out more about studying this course, please use the following:

UK enquiries:
Call 0800 268 7737
Email study@arden.ac.uk

International online learning:
Call +44 20 300 56070
Email online@arden.ac.uk

Berlin blended learning:
Call +49 30 23590100
Email studyberlin@arden.ac.uk

Entry requirements

Standard entry:

- A 2.2 Honours degree in a computing-related subject, or an equivalent 2.2 Honours degree with 18 months of relevant computing work experience.

Non-standard entry:

- A minimum of 3 years of relevant computing work experience in a computing or IT role.
- IELTS 6.5 (no less than 6.0 in any element); or TOEFL iBT 90; or equivalent.
- Alternatively, evidence you have previously studied in English can be accepted.
- We also offer an internal English test for applicants who are unable to provide an English Proficiency letter.

Career Progression

- Cybersecurity Manager
- IT Risk Manager
- IT Security Specialist
- Director of Security
- Systems Administrator
- Solution Architect

If you'd like to get your application started, please click here.

Online learning

Studying this course online gives you a lot of flexibility and convenience. You can enrol with us from anywhere in the world and study your degree from the comfort of home, without the requirement to attend classes in a physical location.

You'll study the course through ilearn, our university campus in the cloud. ilearn provides you with an integrated online learning experience, including your virtual classroom, lecture hall, and online library of more than half a million books and journals – yours for free while you study with us.

Studying online doesn't mean studying alone. As well as receiving regular feedback and guidance from your course tutor, you'll be studying with likeminded students and you'll have access to community message boards to discuss your course and the topics being raised within it.

We've even set up community boards embedded into each of the course modules so you can have discussions with your tutor and classmates on the topics you're currently learning.

You can find out more about online learning with Arden University here.

Online learning key benefits

- Study anywhere worldwide
- Plan your own schedule
- Benefit from reduced costs
- Study around work and family life

Discover why so many students choose online learning with Arden here.

Blended learning

Blended learning with Arden University brings you the best of both worlds: a flexible mix of face-to-face teaching combined with independent online learning that you can take part in whenever and wherever works best with your existing commitments.

When you study via blended learning, you'll study two modules at a time over 10-week study blocks. Each week of study will require a minimum of 33.5 hours of participation, which comprises:

- 8 hours of timetabled face-to-face teaching each week based in one of our study centres
- A minimum 25.5 hours of independent online learning

Your face-to–face classes will be scheduled on either two mornings (9.00am to 1.00pm) or two afternoons (1.30pm to 5.30pm) during teaching weeks. Some of our courses are also available with evening classes in select locations. You'll be able to opt for your preferred time when you apply and, we'll do our best to accommodate your preferred schedule subject to student intake numbers for your course.

Study centre locations

- Ealing, London, UK
- Holborn, London, UK
- Tower Hill, London, UK
- Birmingham, UK
- Manchester, UK
- Leeds, UK
- Berlin, Germany

Please note: course availability varies depending on study centre location.

You can find out more about blended learning with Arden University here.

This course delivers exciting and up-to-date module content that guarantees you'll develop essential workplace skills for your future. Just a few course highlights embedded into your modules include hands-on experience in designing secure networks, mastering ethical hacking and digital forensics using the latest tools and methodologies, and identifying and mitigating global cyber security risks.

Your module assessments will be practice-driven, mirroring real-world practitioner skills to ensure that you graduate from your course ready to take on future challenges in cyber security with confidence. Please see the following pages for a detailed overview of each course module.

Level 7 core modules

Information Security Management (20 credits)

Develop your critical knowledge and skills in information security management and the principles and techniques used to securely manage an organisation's assets. Analyse standards that ensure threats are clearly identified to limit liabilities and reduce the likelihood of data breaches. Use a range of InfoSec security tools to build your practical skills in the protection of enterprise information from unauthorised access, misuse, or destruction. Acquire the knowledge and best practices to protect data as set out in the ISO 27000 standards. Identify the national and international laws that are required to maintain compliance.

- **Demonstrate key information security management principles and practices by critically evaluating an organisation's approach to information security.**
- **Propose and advise on the design and implementation of a strategy to meet the legal, regulatory, organisational and/or societal requirements for information governance and compliance.**
- **Reflect on approaches to information security management, organisational culture, and opportunities for self-development.**

Network Security (20 credits)

Develop your critical knowledge and skills in network security principles, tools, and techniques to proactively secure against adapting threat vectors. Introduce fundamental concepts, principles, and technologies used within modern networks to defend against common attacks. Analyse network protocols used within different OSI layers and assess their security requirements. Apply practical networking skills to modern network designs by configuring firewalls, switches, and routers to defend against common attacks. Design modern networks that support strategies such as Software Defined Networks (SDN), Network Functions Virtualisation (NFV), and Zero Trust.

- **Select and deploy appropriate network defence tools, mechanisms, protocols, and methodologies against adaptive attack vectors in existing and emerging network architectures.**
- **Critically evaluate security technology components that can address security issues in the context of creating resilient network architecture solutions.**
- **Evaluate your network security engineering skills in relation to industry requirements.**

Secure System Design (20 credits)

Develop your critical knowledge and skills in secure system design principles and techniques to ensure modern systems are designed and built securely. Apply modelling techniques to determine attack vectors and appropriate controls for reducing attack surface and building resilience. Evaluate the controls used within Identity and Access Management (IAM) and how these can be implemented. Explore modern cryptography, how it works, and how it is implemented to secure systems today. Develop practical skills in defensive security, particularly relating to areas such as infrastructure and endpoint protection.

- **Evaluate approaches to secure system design to meet the needs of differing security cases.**
- **Critically appraise the use of controls within secure system design to demonstrate defence in system depth and hardening.**
- **Critically evaluate the role of assurance and its impact on secure system design.**

Offensive Security (20 credits)

Develop your critical knowledge and skills in cyber offensive security and the use of penetration testing to test defences and identify security concerns. Cover the core topics in penetration testing, intelligent analysis, advanced security analysis, and the regulatory social, professional, and business issues in cyber offensive defence. Develop practical skills using industry-standard penetration testing tools and frameworks such as MITRE ATT&Ck and Cyber Kill Chain to gain a critical awareness of how cyber-attacks occur. Recognise the phases of system hacking and the techniques used to gain access. Acquire the technical skills required to scan networks and perform vulnerability assessments.

- **Apply practical problem-solving skills to discover and safeguard exploitable communications channels against cyber threats.**
- **Use appropriate offensive security methodologies to identify vulnerabilities within a given system to secure data and associated infrastructures from cyber-attacks.**
- **Review the effectiveness of methods, techniques, and preventive security measures to protect systems.**

Cloud and Web Services Security (20 credits)

Develop your critical knowledge and skills in cloud and web service security concepts. Provide insights into different internet security threats and how to apply essential security techniques to test and protect these services from attacks. Develop your practical techniques by exploring common vulnerabilities and applying appropriate mitigations as identified in the OWASP Top 10 vulnerabilities. Identify different cloud, web, and mobile security threats, apply essential security techniques to test and protect from attacks, and recommend future improvements.

- **Recognise common security threats to contemporary cloud and web services.**
- **Deploy appropriate internet-based application security models to secure applications against potential security threats, evaluating these models against relevant security standards.**
- **Appraise social, ethical, and legal considerations relevant to cloud and web applications and their impact on an enterprise.**

Digital Forensics and Incident Management (20 credits)

Develop your critical knowledge and skills in digital investigations and incident handling. Explore the professional acquisition and analysis of digital evidence using effective tools and techniques and offer recommendations for future improvements. Assess the role and responsibilities of the digital investigator using industry-standard tools and techniques. Use secure environments to develop practical skills in acquiring and analysing digital evidence using appropriate forensic tools and techniques, ensuring ethical and legal procedures are followed. Develop the skills to identify malware activity and behaviour and the techniques used to evade detection.

- **Construct and carry out a strategy to recover appropriate digital evidence for a given scenario.**
- **Critically evaluate the role of incident response management in digital forensics and evidence preservation.**
- **Critically reflect on the legal, professional, and ethical issues related to the work of digital investigators and incident responders.**

Advanced Computing Project (60 credits)

You will address a computing problem through the design, building, testing, and evaluation of an appropriate computing artefact. You will develop your ability to make critical and evaluative judgements in your chosen topic, and provide workshops to consolidate the project management and technical skills covered in the taught elements of the programme. This course will support you in successfully producing industry-relevant practical outputs and demonstrating your project management skills to future employers.

- **Select, evaluate, and apply critical thinking to an organisational issue or problem within the computing field.**
- **Review literature and methodologies to design and carry out appropriate research and development activities.**
- **Compare and contrast the relative merits of different technical development processes and their relevance to different situations.**
- **Demonstrate effective planning and project management to develop and present an appropriate computing artefact.**

Dr. Mohammed Rehman

Head of School – STEM

Dr. Rehman began his career in media, graphic design, and desktop publishing before moving into IT administration and support in the publishing and education sectors. He then made the transition into academia, starting out in multimedia and computing and business before moving onto computing programme leadership. During his 20 years in Higher Education, Mohammed has developed and delivered courses across all study levels and worked on a variety of initiatives and projects related to technology and enhanced learning.

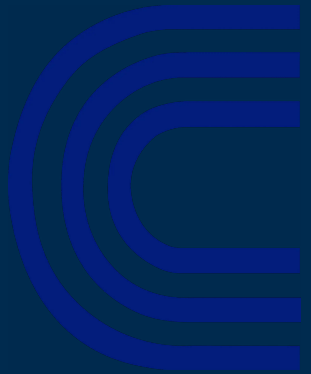
Why study with Arden University?

At Arden University we believe everyone, everywhere has the right to gain the life and career benefits that higher education can bring. We are dedicated to making the university experience convenient and accessible to ambitious and motivated individuals worldwide.

Our mission is to connect adult learners like you with higher education study opportunities that give you the tools you need to fulfil your career and life goals. We challenge conventional perceptions of degree study by providing flexible, vocational courses with timetables and learning options that fit around your life commitments.

As an education provider that is not constrained by bricks and mortar or traditions, we are able to offer courses that are innovative, affordable, and which help students and employers reap the benefits of contemporary training and skills development.

Arden is the university that comes to you, on your terms, helping you achieve the life and professional success you want.



Visit certgates.com

Apply now for a free, no-obligation consultation to discuss your eligibility and next steps.

APPLY NOW

Chat with Us

Find Us on Google Maps

Email Us