

Cyber Security

MSc



The Guardian
TOP 50
University Guide 2015

College of Engineering and Technology

C

Essential Information

Location

Derby campus, Kedleston Road

Duration

One year full time or three years part time

Start dates

September and January

Entry requirements

An undergraduate degree (at least second class) or an equivalent qualification.

Entry requirements for EU/international students

As above (or the international equivalent). If English is not your first language, then you'll need to hold IELTS 6.5 or above.

Suitable for applicants from



Cyber Security

MSc

The course aims to

- **Develop the next generation of IT security professionals: highly skilled individuals who can harness innovative techniques based on latest research.**
- **Help you take a strategic and holistic approach when protecting an organisation's systems and making related management decisions.**
- **Improve your prospects by preparing you for BSI ISO 27001 lead auditor and EC-Council Certified Ethical Hacker (CEH) certifications.**

About the course

The speed with which the internet and information sharing have developed has exceeded the pace of secure infrastructure development. As a result, individuals with proven information security knowledge are now in high demand.

This course bridges the gap and helps to meet the growing need for suitably qualified IT security professionals. You'll develop your knowledge and understanding so that you can create a secure and effective information infrastructure for any organisation.

As well as covering established techniques, you'll explore new and innovative practices underpinned by the very latest research. You'll learn about both the managerial and technical elements of information security and enterprise level security, including risk management and compliance, and you'll concentrate on issues such as securing networks and system penetration testing.

In addition to acquiring technical skills that can be applied to protect against specific system breaches, you'll become adept at making managerial decisions related to protecting an organisation's security holistically. You'll also learn how to perform ethical hacking. This is vital training; through being taught many of the techniques used by malicious hackers, you will develop the skills you need to mitigate risks and thwart potential attacks.

This MSc is designed and delivered by our team of information security experts who have a blend of industry experience and strong academic credentials. We have also

worked closely with industry to ensure you have the workplace-ready attributes employers are looking for.

Increasing your employability further still, the course will prepare you for the BSI ISO 27001 lead auditor and EC-Council Certified Ethical Hacker (CEH) certifications.

You'll study in our computing suite, which is equipped to industry standards.

Course content

The course is made up of three stages – Postgraduate Certificate, Postgraduate Diploma and MSc.

Postgraduate Certificate and Postgraduate Diploma

You'll study three of these modules to achieve the Postgraduate Certificate and the remaining three to achieve the Postgraduate Diploma:

Advanced Security Protocols

This module aims to equip you with the advanced knowledge and understanding you need to analyse complex security protocols. It focuses on the protocols required to ensure security over remote networks.

Enterprise Security Management

Management of the security process is a crucial part of successful implementation. This module looks at the fundamental network and security management issues that affect businesses, including the often conflicting organisational goals that can lead to difficult trade-offs between affordability and effective protection.

Industrial Research Practice

This module will enable you to experience the research processes in cyber security. You will be required to demonstrate your awareness of new cyber security issues and solutions in the context of a particular industry, and be able to apply this to your working. You will investigate new cyber security attacks, develop an academic approach to examine the threats, evaluate and critically analyse the available solutions.

Moreover, the module covers aspects of being a successful researcher in cyber security. The module includes participating in a mock cyber security conference, giving appropriate critical feedback, communicating cyber security issues to a variety of audiences and writing cyber security research proposals.

Securing Networks

The focus of this module is on protecting a network from external and internal threats. Different methods of system breach will be discussed, together with the mechanisms for detecting and protecting against them, such as firewalls, anti-malware and Intrusion Detection and Prevention Systems (IDPS). You'll be assessed on your understanding of how attacks can be perpetrated and detected.

Security: Attacks and Countermeasures

Through investigation, analysis and creative design, this module will enhance your skills in protecting systems against internal and external threats. You'll develop the analytical tools to perform pragmatic and ethical system penetration testing. Using popular open source tools, you'll also research and develop innovative methods to uncover security vulnerabilities in modern networked environments. The module also features research into how to circumvent real-world attacks using appropriate detection and prevention techniques.

Studying at Masters Level and Research Methods

This module will develop your skills to study at masters level within the computing discipline and will help you to plan and execute a research project.

MSc

You'll study this module:

Independent Scholarship

This triple module gives you the opportunity to consolidate what you've already learned on the course and to extend your understanding, skills and knowledge in information security. You'll formulate, research and resolve a commercial IT problem, usually working in partnership with

industrial collaborators, to help focus attention on specific and real applications.

Your project will normally be closely related to the University's own research activity within computing. You'll present your findings and solution in the form of a dissertation, through which you'll demonstrate your ability to apply your learning in an independent and rigorous fashion.

Similar courses:

- MSc Advanced Computer Networks
- MSc Information Technology
- MSc Mobile App Development

Essential Information

How To Apply

www.derby.ac.uk/applyonline

Fees for UK/EU students

2014/2015 fees were £755 per 20 credit module. You'll study the equivalent of nine 20 credit modules in total. Please check our website for the latest information.

Fees for International students

2014/2015 fees were £11,260 per year. Please check our website for the latest information.

Contact us

Kim Smith
T: 0044 (0)1332 591680
E: A.K.Smith@derby.ac.uk

Follow us on





Order your prospectus online:
www.derby.ac.uk/prospectus



If you'd like this information in large print,
braille or audio please contact:

T: 01332 591044

E: marketing@derby.ac.uk

University of Derby
Kedleston Road
Derby DE22 1GB

The information in this leaflet was correct at the time of printing;
please check our website for the most up to date information.

© University of Derby 2014