Faculty of Computing, Engineering and the Built Environment

BIRMINGHAM CITY University

Computer Networks and Security
BSc (Hons)

COURSE FACTS

Faculty	Computing, Engineering and the Built Environment
School	Computing, Telecommunications and Networks
Application	Apply through UCAS. Institution code B25, Course code GG49
Location	City Centre Campus, Millennium Point
Duration	Full-time: three years, part-time: five years, sandwich: four years

KEY FACTS

- You will learn how to design and implement identification systems, data capture systems, communications networks and their security protocols within a business environment.
- The course is accredited by the Institute of Engineering and Technology (IET) - successful completion meets the educational requirements for IEng status.

WHY CHOOSE US?

- Our School of Computing, Telecommunications and Networks is established as one of the leading academies for Apple, Microsoft and Cisco Systems.
- Our strong links with companies like SAS, SAP, Xbox, Samsung, Intel and NEC keep your course relevant, real-life and respected by employers.
- Our specialist security and digital forensics laboratory hosts sophisticated biometric fingerprint and facial recognition software, scanners and cameras in addition to advanced Radio Frequency Identification (RFID), Smart Card and barcoding equipment used for software based security systems development.

COURSE OVERVIEW

Many of the issues concerning security relate to systems and devices in which failures in protection can endanger human life, the safety and viability of industrial and commercial systems, the safety of the environment, undermine public confidence and fuel criminal activity. Combating fraud and malice, together with the requirements for handling errors and mischance, are core objectives in the development of secure network and communication systems.

This course will provide you with the capability to design, implement and evaluate identification systems, data capture systems and communications networks and their associated security protocols within a business environment. On completion of the course you will have a clear understanding of data communications and associated security techniques that should be used within a network environment.

www.bcu.ac.uk/ctn

IET Collective inspiration

CISCO Networking Academy

Business Professional Theme	Toolbox Theme	Emerging Technologies Theme	Programming and Security Theme	Communication Network Theme
YEAR 1				
Professional Context of Technology 15 Credits	Data Analysis 15 Credits	Computer Systems Technology 30 Credits	Visual Programming 30 Credits	Computer Network Basics 30 Credits
YEAR 2				
Management in Technology Innovation 15 Credits	Open Systems 15 Credits	Data Capture Technology 30 Credits	Security Systems Theory 30 Credits	Switched LANS and WANS 30 Credits
YEAR 3				
Individual Project 30 Credits		Personal ID and Authentification Systems 30 Credits	Advanced Network Technologies 30 Credits	Network Design and Management 30 Credits

COURSE STRUCTURE

The course comprises five themes:

- **Programming and Security:** This theme consists of computer programming, aspects of security encryption and network security.
- **Emerging Technologies:** This consists of skills to specify and develop elements of a secure system, integrating hardware, software and business elements.
- **Toolbox:** This theme consists of developing analytical skills for computer networking.
- **Communication Networks:** This covers technologies employed in Local and Wide Area Networks. It follows the Cisco CCNA curriculum and introduces protocols, LAN/WAN terminology, TCP/IP, addressing, switching, routing protocols and management of networks.
- **Business:** This is concerned with providing professional development, and an introduction to the business macro-environment sector. You will gain an understanding of market-led innovation planning and management. It also develops your teamwork skills in evaluating and effectively communicating information in both written and oral form.

ASSESSMENT

A range of assessment methods are used throughout the course including continuous assessment, in-class tests, examinations, laboratory exercises and project work.

ENTRY REQUIREMENTS

- 280 points. Minimum of two six-unit or one 12-unit A-Level (GCE or VCE)
- Pass National Diploma with Merit Merit Distinction
- Advanced Diplomas are accepted
- AGNVQ overall Merit and GCSE Maths and English grade C
- Irish: 280 points in ILC, Scot: 280pts from four Highers, IB: 30pts

FURTHER STUDY

The University has a range of either taught (MSc) or research (MPhil and PhD) postgraduate programmes. Details can be found on the postgraduate section of the website.

EMPLOYABILITY

This course prepares you to confidently move towards a career in providing technical, software or applications support or training; network management, network design and build engineers; specifying, designing or managing secure communications networks or the applications they support; or implementation and/or evaluation of secure networks.

Recent graduates from the school have gone on to work for Hewlett Packard, Bell Micro, Birmingham City Council, BT, Cisco, Deloitte, Ericsson, Fujitsu, IBM, Intel Corporation, NHS, Motorola, National Express, NEC, Royal Mail, Shell IT, JP Morgan Chase and Co, Carillion, Siemens, Nokia, Capgemini and Sytel.

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