

COMPUTER & NETWORK ENGINEERING

As a computer and network engineering undergraduate at the University of Westminster, you will benefit from some of the best teaching and facilities available. You will be part of the Faculty of Science and Technology, based at our purpose-built Cavendish Campus in the heart of London, close to major industry headquarters and the City. The Faculty and Campus have undergone a major programme of refurbishment, with more than £30million invested in creating state-of-the-art facilities and resources. These include numerous laboratories offering access to Windows and Linux platforms, running industry-standard, computer-aided analysis and design applications.

Teaching and learning

You will learn the fundamental principles of computing and network engineering, and be encouraged to use initiative and confidence in approaching engineering problems, investigating solutions using a blend of analytical and practical skills. Teaching methods include lectures and seminars, laboratories and computer-aided engineering, group and individual projects, and online learning. Students specialise in networking, communications, system and network programming as well as interfacing hardware and software. Our aim is to develop graduates with the right skill-set in computer systems and networking for today's job market.

Employability

All of our courses offer you the opportunity to take a year-long industry placement between Years 2 and 3, giving you a competitive edge in the job market and contributing to your professional development. Our courses are accredited by the appropriate professional bodies, the Institution of Engineering and Technology (IET), the Engineering Council, and BCS – the Chartered Institute for IT, enabling you to become Chartered and Incorporated Engineers after gaining professional experience. Our graduates have gone on to work for BT, British Aerospace, CITRIX Systems, KDDI Global, Nokia, O2 Communications, Ping Networks and smaller private companies. Some have started up their own businesses in manufacturing or consultancy.

See also: Computer Science & Software Engineering p86 • Electronic Engineering p94 • Multimedia & Games Computing p140



95%
of our students
agreed that
the library
resources and
services were
appropriate



Library and computer facilities at our Cavendish Campus

Data from National Student Survey 2016

COMPUTER NETWORK SECURITY

BSc HONOURS

Length of course: Three years full-time; four years full-time with industrial placement or Foundation
UCAS code: G423; with Foundation G425
Campus: Cavendish (See p22)

Typical offer for September 2017: A Levels – BCC/A*A to include at least one technical subject; International Baccalaureate – 26 points including 5 in a Higher Level technical subject; Pearson BTEC Level 3 Extended National Diploma/National Diploma – DMW/D*D* in Engineering, ICT or Computing, to include Maths at Level 3. Plus GCSE Maths and English at Grade C or above (Functional Skills qualifications are not accepted). See also entry requirements on p201.



Security is a vital aspect of any networked system, especially as the dependency on network infrastructures has grown over the past few decades. This course has been designed to meet the demand for graduates with application-oriented engineering skills and know-how, particularly in relation to local, wide and wireless area networks and network security. The course focuses on three main aspects – communication, network design and implementation, and security.

The course emphasis is on hands-on work at every level, with a focus on ‘learning by doing’ which enhances the development of your engineering skills. It will equip you with knowledge and understanding of current technologies applied to network security, of modern computer architecture, and of the role and responsibilities of the professional engineer.

For module information and further details, please visit: westminster.ac.uk/computer-and-network-engineering



“The things I like most about my course are the meetings with knowledgeable lecturers who are willing to answer all the questions, the practical lab sessions, and the great facilities inside the University.”

Chris Galazka
 Computer Network Security BSc Honours, graduate

COMPUTER NETWORKS AND COMMUNICATIONS

BSc HONOURS

Length of course: Three years full-time; four years full-time with industrial placement or Foundation
UCAS code: PG94; with Foundation G427
Campus: Cavendish (See p22)

Typical offer for September 2017: A Levels – BCC/A*A to include at least one technical subject; International Baccalaureate – 26 points including 5 in a Higher Level technical subject; Pearson BTEC Level 3 Extended National Diploma/National Diploma – DMW/D*D* in Engineering, ICT or Computing, to include Maths at Level 3. Plus GCSE Maths and English at Grade C or above (Functional Skills qualifications are not accepted). See also entry requirements on p201.



Communications technology requires knowledge of the interaction of hardware and software in complex networks. This course covers all aspects of computer networks, from the physical transmission of signals, through the protocols required for the safe transmission of data, to the end-to-end services built on the communications backbone. Wired and wireless networks are covered, there’s special emphasis on the transportation of real-time audio and video media, and a strong focus on support and services for wired and wireless communication systems.

The course emphasis is on hands-on work at every level, enhancing the development of your engineering skills. It will give you the understanding, experience and flexibility to work at different levels with networked communication systems, from digital modulation through network architecture, routing and management.

For module information and further details, please visit: westminster.ac.uk/computer-and-network-engineering



COMPUTER SYSTEMS AND ROBOTICS

BEng HONOURS

Length of course: Three years full-time; four years full-time with industrial placement or Foundation
UCAS code: H650; with Foundation H653
Campus: Cavendish (See p22)

Typical offer for September 2017: A Levels – BBB to include Maths; International Baccalaureate – 28 points including 5 in a Higher Level Maths; Pearson BTEC Level 3 Extended National Diploma – DDM to include Distinction in Maths at Level 3. Plus GCSE Maths and English at Grade C or above (Functional Skills qualifications are not accepted). See also entry requirements on p201.



Embedded computer systems are found in every part of modern life, from cameras and kitchen appliances to collision-avoidance systems in cars, creating a surge in demand for engineers with the necessary skills and knowledge to develop and implement such systems.

This course provides a solid grounding in the design and realisation of modern embedded systems with particular emphasis on robotic systems. Robotics is a cross-disciplinary area with its roots in traditional engineering subjects such as electronic, electrical, computing, mechanical, networking and control. However, it also opens up new and fascinating areas of study such as computer vision and machine intelligence. Robotic systems find application in a broad range of sectors such as transport, logistics, military, manufacturing, emergency services, domestic assistance and healthcare.

For module information and further details, please visit: westminster.ac.uk/computer-and-network-engineering



COMPUTER SYSTEMS ENGINEERING

BSc HONOURS

Length of course: Three years full-time; four years full-time with placement year or Foundation
UCAS code: H657; with Foundation H656
Campus: Cavendish (See p22)

Typical offer for September 2017: A Levels – BCC/A*A to include at least one technical subject; International Baccalaureate – 26 points, including 5 in any Higher Level Technical subject; Pearson BTEC Level 3 Extended National Diploma – DMW/D*D* to include Merit in Maths at Level 3. Plus GCSE Maths and English at Grade C or above (Functional Skills qualifications are not accepted). See also entry requirements on p201.



Computer systems engineering is a growing market in today’s computer industry. Embedded systems have become widespread in industry and can be found in almost all modern consumer devices, from washing machines to cars. This course aims to develop your skills as a strong computer-based engineer, in demand in both industry and research. It will equip you with the necessary knowledge and engineering skills related to modern day computer and embedded microprocessors, as well as embracing their structure, design and efficient operation.

This course focuses on three main areas – the computer system, embedded systems and operating systems – and you will gain the technical expertise and knowledge to take a good idea from conception through to a viable product, a key characteristic for many employers.

For module information and further details, please visit: westminster.ac.uk/computer-and-network-engineering



For the Foundation year course for degrees in computer and network engineering, see our Engineering Foundation course on p98.