

BUSINESS INFORMATION SYSTEMS

Our Business Information Systems programmes develop professionals who understand business challenges, and conceive and manage solutions which are increasingly ICT-dependent. By examining issues such as security, privacy and ethics in information systems, you will enhance your understanding of societal use of information systems.

All of our Masters teaching is informed by links to industry and supported by up-to-the-minute research conducted by in-house research teams active in the areas like Data and Knowledge Management, Health and Social Care Modelling, Computational Intelligence, Parallel Computing, Distributed and Intelligent Systems, Semantic Computing, and Computer Vision and Imaging.

Our programmes are accredited* by BCS – The Chartered Institute for IT as meeting the requirements for Chartered IT Professional (CITP) Further Learning and partially meeting the requirements for Chartered Engineer (CEng). They also have Euro-Inf Master Quality Label accreditation* from the European Quality Assurance Network for Informatics Education (EQANIE).



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*pending final confirmation following recent (re-)accreditation visit.

BIG DATA TECHNOLOGIES MSc

Recent technological advances decreasing hardware costs and the 'Internet of things' has led to a rapid explosion in the amount of data generated in a variety of domains, including data-driven science, telecommunications, social media, large-scale e-commerce, medical records and e-health. Big data refers to the ability of exploiting these massive amounts of extremely heterogeneous in structure and content data that are routinely generated at an unprecedented scale from an ever-expanding variety of data sources.

Business and industry used their big data to extract a better understanding of customers' needs and behaviour, to develop targeted new products and to cut operational costs. The competitive advantages and productivity gains that big data brought led to a great number of big data projects and a shortage of people with the required skills.

This course has been designed to build your knowledge and understanding of big data systems architectures and to equip you with the range of highly marketable, hands-on skills employed by the core technologies utilised in big data projects.

Course content

The course addresses technologies, advanced theories and techniques, along with their application, implementation and integration with legacy systems. You will analyse new demands and the application of technologies in the management of data and information resources, and examine big data technologies shaping the way data is now stored and utilised including the use of cloud stored massive datasets, distributed systems of an enterprise and how data utilisation can change and improve business processes.

Teaching approaches include lectures, tutorials, seminars and practical/hands on sessions. You will also learn through extensive course work, class presentations, group work, and the use of a range of industry standard software such as R, Python, Hadoop, MySQL, and Oracle.

Length of course: one year full-time or two years part-time, starting in September

Location: Central London (Cavendish)

Faculty: Science and Technology

Course fees and funding: see course web page and westminster.ac.uk/fees

Entry requirements: see page 216

For full and most up-to-date information, see course web page: westminster.ac.uk/big-data-technologies-msc

Core modules

- Big Data Theory and Practice
- Business Systems Postgraduate Project
- Data Repositories Principles and Tools
- Data Warehousing and OLAP
- Research Methods and Professional Practice

Option modules

- Advanced Big Data Analytics
- Cloud Computing Applications
- Data Visualisation and Dash-Boarding
- Web and Social Media Analytics
- Web-enabled Database Applications

Professional recognition

This programme is accredited* by BCS – The Chartered Institute for IT as meeting the requirements for Chartered IT Professional (CITP) Further Learning and partially meeting the requirements for Chartered Engineer (CEng). It also has Euro-Inf Master Quality Label accreditation* from the European Quality Assurance Network for Informatics Education (EQANIE).

*pending final confirmation following recent (re-) accreditation visit.

Associated careers

The course equips you with the technology knowledge and the highly sought hands on/practical skills for a successful career in big data application domains.

Graduates are expected to find employment as developers, analysts, architects of big data systems, database/web application developers, data compliance officers, data quality officers, data governance officers, data governance analysts, OLAP programmers, ETL programmers and application developers, specialists in data acquisition, knowledge/information extraction, data analysis, data aggregation, data representation.



BUSINESS INTELLIGENCE AND ANALYTICS MSc

Length of course: one year full-time or two years part-time, starting in September

Location: Central London (Cavendish)

Faculty: Science and Technology

Course fees and funding: see course web page and westminster.ac.uk/fees

Entry requirements: see page 216

For full and most up-to-date information, see course web page: westminster.ac.uk/business-intelligence-and-analytics-msc

Core modules

- Big Data Theory and Practice
- Business Analytics
- Data Mining and Machine Learning
- Research Methods and Professional Practice
- Business Systems Postgraduate Project

Option modules

- Advanced Big Data Analytics
- Business Optimisation
- Data Visualisation and Dashboarding
- Data Warehousing and OLAP
- Data Repositories Principles and Tools
- Simulation Modelling: Risk, Processes, and Systems
- Web and Social Media Analytics

Professional recognition

This programme is accredited* by BCS – The Chartered Institute for IT as meeting the requirements for Chartered IT Professional (CITP) Further Learning and partially meeting the requirements for Chartered Engineer (CEng). It also has Euro-Inf Master Quality Label accreditation* from the European Quality Assurance Network for Informatics Education (EQANIE).

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Associated careers

Graduates can expect to find employment as consultants, decision modelling or advanced data analysts, and members of technical and analytics teams supporting management decision making in diverse organisations. Typical employers include local authorities, PLCs (such as GlaxoSmithKline, Prudential, Santander and Unilever), public sector organisations (such as the NHS and primary care trusts), retail head offices, the BBC, the Civil Service and the host of banks, brokers and regulators that make up the city, along with all the specialist support consultancies in IT and market research and forecasting, all of whom use data for the full range of decision making.

This course addresses the need to propel information-gathering and data organisation, and exploit potential information and knowledge hidden in routinely collected data to improve decision-making. The course, which builds on the strength of two successful courses on data mining and on decision sciences, is more technology focused, and stretches the data mining and decision sciences theme to the broader agenda of business intelligence.

You will focus on developing solutions to real-world problems associated with the changing nature of IT infrastructure and increasing volumes of data, through the use of applications and case studies, while gaining a deep appreciation of the underlying models and techniques. You will also gain a greater understanding of the impact technological advances have on nature and practices adopted within the business intelligence and analytics practices, and know how to adapt to these changes.

Course content

Embedded into the course are two key themes. The first will help you to develop your skills in the use and application of various technologies, architectures, techniques, tools and methods. These include warehousing and data mining, distributed data management, and the technologies, architectures, and appropriate middleware and infrastructures supporting application layers. The second theme will enhance your knowledge of algorithms and the quantitative techniques suitable for analysing and mining data and developing decision models in a broad range of application areas.

The project consolidates the taught subjects covered, while giving you the opportunity to pursue in-depth study in your chosen area.

Teaching approaches include lectures, tutorials, seminars and practical sessions. You will also learn through extensive course work, class presentations, group research work, and the use of a range of industry standard software such as R, Python, Simul8, Palisade Decision Tools, Hadoop and Oracle.



BUSINESS SYSTEMS DESIGN AND INTEGRATION MSc

The concept of system design and integration focuses on significant collaboration of software sub-systems, with an aim of synchronizing varied functions involved in businesses. One of the major market drivers for the European systems design and integration market is rise in number of investments made by enterprises operating in the field of systems design and integration market. Several enterprises are utilising system design and integration solutions in order to integrate their internal processes with external commercial entities, for expanding business operations across various geographical markets.

Course Content

This course is aimed mainly at applicants who wish to develop their knowledge and expertise matching information architectures and software systems to the needs of improving and/or advancing today's businesses. Today, this increasingly means that businesses are working together as an enterprise. In an enterprise, information is meaningless if it cannot be retrieved and used to help support and improve business processes, services and decision making. In this course we study the concepts and technologies that help companies link their business processes and services together to deliver what stakeholders want and also let them manage their resources more efficiently so that they can be sustainable and achieve further growth and better delivery of customer services.

Teaching approaches include lectures, tutorials, seminars and practical/hands-on sessions. You will also learn through extensive course work, class presentations, group work, and the use of a range of industry standard software such as R, Python, Hadoop, MySQL and Oracle. Assessment usually involves a combination of exams and coursework, leading to a product such as a presentation, group investigation, technical solution, a piece of software or a research review.

Length of course: one year full-time or two years part-time, starting in September

Location: Central London (Cavendish)

Faculty: Science and Technology

Course fees and funding: see course web page and westminster.ac.uk/fees

Entry requirements: see page 216

For full and most up-to-date information, see course web page: westminster.ac.uk/business-systems-design-and-integration-msc

Core modules

- Big Data Theory and Practice
- Business Systems Postgraduate Project
- Business System Modelling
- Software Architectures Design and Deployment
- Research Methods and Professional Practice

Option modules

- Advanced Big Data Analytics
- Data Warehousing and OLAP
- Cloud Computing Applications
- Data Visualisation and Dash-Boarding
- Web and Social Media Analytics
- Web-enabled Database Applications
- Data Repositories Principles and Tools

Professional recognition

This programme is accredited* by BCS – The Chartered Institute for IT as meeting the requirements for Chartered IT Professional (CITP) Further Learning and partially meeting the requirements for Chartered Engineer (CEng). It also has Euro-Inf Master Quality Label accreditation* from the European Quality Assurance Network for Informatics Education (EQANIE).

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Associated careers

The course equips you with the technology knowledge and the highly sought hands-on/practical skills for a successful career as IT consultant or business analyst. Graduates of the programme are expected to find employment as consultants, developers and/or, analysts, architects of business systems, data compliance officers, data quality officers, data governance officers, data governance analysts, data/systems integration, specialists in knowledge/information extraction, data analysis, data aggregation and representation.

