Birkbeck, University of London

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19,000 students study with us every year. They join a community that is as diverse and cosmopolitan as London’s population.

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School of Business, Economics and Informatics
Department of Computer Science and Information Systems

Cloud and Data Technologies

Postgraduate Certificate in Cloud and Data Technologies

* National Student Surveys 2006–2012

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Cloud and Data Technologies

Aims

This specialist programme of study focuses on an area of growing importance in the IT industry – Cloud and Data Technologies – which underpin the efforts to develop solutions to the problems of handling ‘big data’.

Students who complete this programme will have obtained specialist knowledge and technical skills which can be used in analysis of problems arising in the use of cloud and data technologies

● evaluation and application of their use

● research into, and development of, new technologies.

Duration

One or two years part-time.

Attendance

● Two evenings a week, October–July.

Special features

The programme has been designed to meet the needs of part-time students wishing to advance their knowledge of cloud and data technologies. Students may be already working in the IT sector and wish to update their skills, or intend to pursue a career in IT subsequently. The programme has significant coverage of emerging technologies and research developments. Successful students may proceed to the final year of the part-time MSc Advanced Computing Technologies programme.

Programme contents

This programme consists of four taught modules:

- **Cloud Computing**
  This covers the emerging area of cloud computing and how it relates to traditional models of computing. Students gain competence in MapReduce as a programming model for distributed processing of ‘big data’.

- **Data and Knowledge Management**
  This covers the principles and application of data and knowledge management technologies and languages including SQL. Students study the use of these in leading commercial database management systems as well emerging approaches to data management.

- **Advances in Data Management**
  This covers the technologies underlying modern data management systems. Students study advanced aspects of query processing, transaction management, distributed data management, and recent developments in web data, ‘big data’ and alternative database architectures.

- **Data Warehousing and Data Mining**
  This covers the organisation, analysis and mining of large data sets to support business intelligence applications. Students study the principles and commercial application of the technologies, as well as research results and emerging architectures underpinning the analysis and mining of ‘big data’.

Students may follow the four modules in one year or two modules in each of two years.

Entry requirements

The normal entrance requirements are a good first degree or MSc in Computer Science, with the syllabus covering a substantial amount of programming, preferably in an object-oriented language. Joint honours computing graduates may also be eligible, provided they have covered a substantial amount of programming, or have equivalent professional experience in the IT industry. **You must be an EU citizen or otherwise have the right to work full-time in the UK in order to enrol in a part-time course.** For more information and online application form please visit [www.dcs.bbk.ac.uk/courses/pgccdt](http://www.dcs.bbk.ac.uk/courses/pgccdt)