



**Birmingham City University**  
**Faculty of Technology, Engineering and the**  
**Environment**

**Undergraduate Programme**

**Programme Specification**

**BSc (Hons) Information and**  
**Communications Technology**

<b>Date of Course Approval/Review</b>	<b>Version Number</b>	<b>Version Date</b>
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# CONTENTS

Definitive Documents and Version Control.....	1
Programme Specification .....	2
Programme philosophy and aims.....	3
Learning Outcomes .....	4
Learning teaching, and assessment methods.....	6
Programme structure.....	7
Support for Learning.....	8
Criteria for admission .....	9
Methods for evaluation and enhancement of quality and standards .....	9



## **Definitive Documents and Version Control**

This document has a version number and reference date in the footer.

The process leading to the introduction of new courses, major changes to courses, and minor changes to courses and modules follows the appropriate formal procedure as described in the Faculty's Academic Procedures and Quality Manual.

On the front sheet of this document, the date of course approval/review refers to the most recent full approval/review event. The version date will be that of the most recent event at which formal consideration was given to course changes.

Further details about the course and document development may be obtained from minutes of the approval or minor changes board. A history of the document since the last full approval/review event is summarised in the table below and further information relating to past versions can be obtained from the Faculty Office.



## Programme Specification

### BSc (Hons) Information and Communications Technology

**Date of Publication to Students: September 2013**

**NOTE:** This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes advantage of the learning opportunities that are provided. More detail on the specific learning outcomes, indicative content and the teaching, learning and assessment methods of each module can be found (1) at <https://mytid.bcu.ac.uk>, (2) in the Module Specifications and (3) in the Student Handbook.

The accuracy of the information contained in this document is reviewed by the University and may be checked within independent review processes undertaken by the Quality Assurance Agency.

<b>Awarding Institution / Body:</b>	Birmingham City University
<b>Teaching Institution:</b>	Birmingham City University
<b>Interim Awards and Final Award:</b>	Cert HE / Dip HE / BSc / BSc (Hons)
<b>Programme Title:</b>	Information and Communications Technology
<b>Main fields of Study:</b>	Computing, ICT Infrastructure, Networking, Information Systems, Database, Business, Management
<b>Modes of Study:</b>	FT/PT/SW
<b>Language of Study:</b>	English
<b>UCAS Code:</b>	G420
<b>JACS Code:</b>	H640

#### **Professional Status of the programme (if applicable):**

The previous version of this programme has been accredited by the Institution of Engineering and Technology (IET) in full fulfilment of the academic requirements for IEng, to include the intakes to 2013. Subject to approval by Senate, this version of the programme will be submitted for re-accreditation by the IET.

The programme will be submitted for accreditation by the Chartered Institute of IT (British Computer Society).



**Relevant subject benchmark statements and other external reference points used to inform programme outcomes:**

QAA benchmark statements for engineering and computing.

Institution of Engineering and Technology guidance.

**Programme philosophy and aims**

The BSc (Hons) Information and Communications Technology is a multidisciplinary course designed to reflect the diversity of challenges involved in integration of ICT into its environment. The course includes all core enabling technologies, such as networking; databases; programming; computer systems, in a business and professional context.

The overall aim of the course is the development of ICT Professionals with a unique mix of technical and managerial competency, with skills applicable to the ICT sector and its diverse areas of business.

**The programme aims to provide learners with the following skills and knowledge of:**

1. Demonstrate Knowledge of the principal features of ICT , its role, structure and organisation including its major managerial, organisational, technical, practical and operational functions, designs and processes;
2. Demonstrate sound understating of concepts, methods, and theories of technologies that underpin information and communications;
3. Analyse problems and plan strategies for their solution;
4. Demonstrate knowledge and understanding of research techniques.
5. Design and implementation of ICT systems with emphasis on business requirements and technological considerations
6. Evaluate principal communication technologies that underpin system design, practice and application;
7. Demonstrate organisational, teamwork and practical management approaches employed throughout a typical system design process cycle.



**Intended learning outcomes and the means by which they are achieved and demonstrated:**

**Learning Outcomes**

On completion of the course, students should be able to:

**1. Knowledge and Understanding**

- KU1. demonstrate knowledge of the principal features of the ICT industry, its role, structure and organisation including;
- KU2. demonstrate knowledge and understanding concepts, principles and theories of network technologies that underpin information transfer and data communications.
- KU3. demonstrate knowledge of the principal infrastructure technologies that underpin operations of business systems, commerce applications and clients.
- KU4. demonstrate understanding of the design and implementation of ICT infrastructure and applications with emphasis on business requirements and technological considerations.
- KU5. demonstrate awareness of relevant ethical, legal, professional and environmental issues applicable to rapidly evolving technology based business;
- KU6. Understand organisational, teamwork and practical management approaches employed throughout a typical development and support of a product life cycle.

**2. Intellectual Skills**

- IS1. Use proficiently information and materials from a variety of sources necessary for independent enquiry and learning.
- IS2. draw independent conclusions based on a rigorous, analytical and critical assessment of argument, opinion and data;
- IS3. Demonstrate use of technical, software, business and IT skills applied to processes, practice and products.
- IS4. Recognise and apply appropriate managerial, technical and practical; operational techniques for a diverse range of practical issues and problems.
- IS5. Analyse the information requirements of an organisation in the achievement of its business goals.
- IS6. Evaluate technologies and their applicable methodologies, frameworks, techniques, approaches or models, identifying strengths



and weaknesses and generating solutions.

### **3. Practical Skills**

- PS1. apply technical, software, business and IT skills to processes, practice and products;
- PS2. apply appropriate methodologies to the realisation of a major project, using primary and secondary, print and electronic sources;
- PS3. collect relevant information, assimilate knowledge, marshal a coherent and rational argument, and relate theory and practice;
- PS4. use appropriate laboratory equipment and software tools to execute safely a series of applied experiments and to generate transferable data;
- PS5. implement applications using appropriate methodologies, tools and techniques;
- PS6. configure and manage ICT Infrastructure for effective operations and transactions.

### **4. Transferable/Key Skills**

- TS1. monitor, record, present, analyse and interpret data;
- TS2. use Information and Communications Technology;
- TS3. communicate effectively through written and presentation tasks;
- TS4. manage time, prioritise activities and work to timescales;
- TS5. reflect on progress and plan for personal and career development;
- TS6. work with and relate effectively to others.



### **Learning teaching, and assessment methods used**

The teaching and learning programme develops **Intellectual skills** through previously tutorial interaction, application of techniques and the undertaking of assignment tasks.

Learning methods include the use of the latest networked computer systems, commercial standard software platforms, and the Moodle virtual learning environment.

Assessment activities include practical work, individual and group work, presentations, written coursework, laboratory experimentation, examinations (seen and unseen, open and closed book). Assessment methods include practical projects, presentations, coursework, peer- and self-assessment.

**Analytical and problem solving skills** are developed using a range of case-studies and problem / task based learning scenarios. Mathematical knowledge and presentation skills are provided as part of the first year core to provide a basis for further study and general understanding of appropriate issues.

The acquisition of appropriate **practical skills** is central to the learning strategy of the programme. Initiative and independence are fostered throughout, and develop incrementally as the course progresses. Emphasis is placed on guided, self-directed and student-centred learning, with increasing independence of approach, thought and process.

Learners develop **research skills** in module activities and assessments and by undertaking a major individual project and completing a related dissertation.

**Transferable skills** are core to the learning strategy of the programme. They are pervasive, and are incorporated into modules and assessments as appropriate, e.g. team-working skills are fostered via group, task-based practical projects. Learners are encouraged to plan their own work schedules and are required to meet deadlines. Reflection and self awareness are fostered by keeping logbooks and attending tutor interviews in support of personal performance.



## Programme structure and requirements, levels, modules, credits and awards

The structure of the course, the modules, levels and credit values, and the awards which can be gained are shown in the diagram below.

### BSc (Hons) Information and Communications Technology

#### Level 6 (Year 3)

30 credits Individual Project (CTN) UG3  PRJ6021	30 Credits Enterprise eSystems UG3  CMPXXXX	30 Credits ICT Infrastructure Management UG3  CMP6047	30 Credits Network Design and Management UG3  CMP6049
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#### Level 5 (Year 2)

15 Credits Research and Professional Practice UG2  CMPXXXX	15 Credits Business and Technology Entrepreneurship UG2  CMPXXXX	30 Credits Enterprise Databases: Design and Implementation UG2  CMP5038	30 Credits Infrastructure Services UG2  CMP5065	30 Credits Switched LANS and WANS UG2*  CMP5056
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#### Level 4 (Year 1)

15 Credits Data Analysis UG1  CMPXXXX	15 Credits IT Professionalism UG1  CMPXXXX	15 Credits Web Technologies UG1  CMPXXXX	15 Credits ICT Programming UG1  CMP4100	30 Credits Computer Systems Technology UG1  CMP4096	30 Credits Computer and Networking Basics  CMP4141
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\* Communication Networks UG2 (CMP5056) is alternative for year 2 entry



### **Awards**

Successful completion of Modules at Level 4 leads to the award of Certificate of Higher Education

Successful completion of Modules at Level 4 and 5 leads to the award of Diploma of Higher Education

Successful completion of Modules at Level 4, 5 and 6 leads to the award of Bachelor of Science with Honours.

### **Support for Learning including Personal Development Planning (PDP)**

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to meet those needs:

- an induction programme dealing with orientation and the dissemination of essential information, including an introduction to PDP;
- a dedicated Learning Centre with open access learning materials, resources and full-time staff specialising in a variety of support areas;
- a Student Handbook, containing information relating to the University, Faculty, course and modules;
- access to administrative staff and to academic staff, including the Tutors, Course Director and Programme Manager, at reasonable times;
- support staff to advise on pastoral and academic issues, and to offer support and assistance with the keeping of Students' Progress Files;
- access to Faculty resources, including a range of IT equipment and the services of, and guidance from, IT support staff;
- access to the University's Student Services, including those offered by the careers service, financial advisers, medical centre, disability service, crèche, counselling service and chaplaincy;
- resources for Professional Development Planning (PDP) to enable reflection on learning, performance and achievement and to plan personal, educational and career development. The university offers a range of on-line courses ([www.moodle.bcu.ac.uk](http://www.moodle.bcu.ac.uk)) to support PDP topics including: Reflection, Career & Employability, Action Planning, Self Awareness and Self Employment.



### **Criteria for admission**

Candidates must satisfy the general admission requirements of the programme.

The current admission requirements can be found under the 'Entry Requirements' tab of the web page for this course.

### **Methods for evaluation and enhancement of quality and standards including listening and responding to views of students**

The following faculty committees are involved in evaluation and enhancement of quality, standards and student experience: Board of Studies, Faculty Board, Learning and Teaching Committee, Academic Standards and Quality Enhancement Committee and Student Experience Committee.

Review and evaluation processes in which students are involved include annual course and module reviews, course review and re-approval events, professional body accreditation visits and external examiner visits. Mechanisms for student input include meetings with course tutors, feedback questionnaires, faculty and university student satisfaction surveys and representation on the faculty committees referred to above.

External examiners are members of examination boards and their remit includes meeting students and monitoring and reporting on academic standards.