Birmingham City University
Faculty of Technology, Engineering and the Environment

Undergraduate Programme

Programme Specification

BSc (Hons) Computer Networks

Date of Course Approval/Review	Version Number	Version Date
7 May 2009	3.02	11 June 2009

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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.

Version	Event	Date of event	Authorised by
3.01	Approval meeting	7 May 2009	Dean of Faculty
3.02	Approval meeting - conditions	11 June 2009	Panel Chair

Programme Specification

BSc (Hons) Computer Networks

Date of Publication to Students: September 2009

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.

Awarding Institution / Body:	Birmingham City University
Teaching Institution:	Birmingham City University
Interim Awards and Final Award:	Cert HE / Dip HE / BSc / BSc (Hons)
Programme Title:	Computer Networks
Main fields of Study:	Communication Networks, Computer Systems Technology.
Modes of Study:	FT/PT/SW
Language of Study:	English
UCAS Code:	G422
JACS Code:	H600

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 2010. Subject to approval by Senate, this version of the programme will be submitted for re-accreditation by the IET.

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

QAA benchmark statements for engineering.
Institution of Engineering and Technology guidance.

Programme philosophy and aims

Developments in high speed digital communication systems and computer networks have created demand for professionals with technical and commercial awareness that can plan, design and service networking applications.

The course aims to address this need through a broadly-based and stimulating curriculum which places emphasis on active and participative learning to produce professionals that will be able to play a significant role in system design and implementation across a range of rapidly developing computer network related areas.

The aims of the programme are to:

- provide a rewarding learning experience which combines study of communication technology, computer operating systems, wireless networks, software development, security systems and business management relevant to industrial and commercial environments;
- enable students to develop skills to specify and design and implement elements of an ICT system, integrating hardware, software and business aspects in compliance with appropriate standards;
- provide an understanding of commercial, social and business factors which influence technical solutions to solve problems;
- satisfy accreditation requirements of the relevant professional bodies and provide a basis for professional development and further educational progress.

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 computer networking industry, its role, structure and organisation;

KU2. demonstrate knowledge and understanding of concepts, principles and technologies that underpin computer networking practice, design and application;

KU3. demonstrate understanding of the design and implementation of computer and global network systems with emphasis on business requirements and technological considerations;

KU4. demonstrate awareness of relevant ethical, legal, professional and environmental issues applicable to rapidly evolving technology based business;

2. Intellectual Skills

IS1. use proficiently information and materials from a variety of sources for independent enquiry and learning;

IS2. demonstrate creative and innovative ability in the synthesis of solutions and in formulating designs in secure computer network systems;

IS3. draw independent conclusions based on a rigorous, analytical and critical assessment of argument, opinion and data;

IS4. recognise and apply appropriate managerial, technical, practical and operational techniques for a diverse range of issues and problems;

IS5. analyse the information requirements of an organisation in the achievement of its business goals;

IS6. select appropriate software tools and techniques for the implementation of network applications;

IS7. apply business management and organisational theories and techniques for a successful computer network enterprise taking account of the legal and regulatory systems within which they operate;

3. Practical Skills

PS1. apply technical, software, business and IT skills to processes, practice and products;

PS2. troubleshoot and diagnose network systems using appropriate procedures and tools;

PS3. collect relevant information and generate systems design;

PS4. use appropriate laboratory equipment and software tools to safely execute applied experiments;

PS5. set up, test and administer systems for effective use;

PS6. implement applications using appropriate methodologies, tools and techniques;

PS7. 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.

Learning teaching, and assessment methods used

Knowledge and understanding are acquired through formal lectures, computer networked practical areas, laboratory experiments, seminars and other directed independent learning activities.
A range of assessment methods are employed, the criteria for each module being published within each specified module guide and assignment briefs.
Knowledge is assessed, formatively and summatively, by a number of methods, including seminars, coursework, examinations (seen and unseen, open- and closed-book), presentations, and practical work.

Intellectual skills are developed through teaching and learning programme previously outlined.

Analytical and problem solving skills are developed using a range of case-studies and problem / task based learning scenarios.

Assessment activities include practical work, individual and group work, presentations, written coursework, laboratory experimentation, examinations (seen and unseen, open and closed book).

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/key 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.

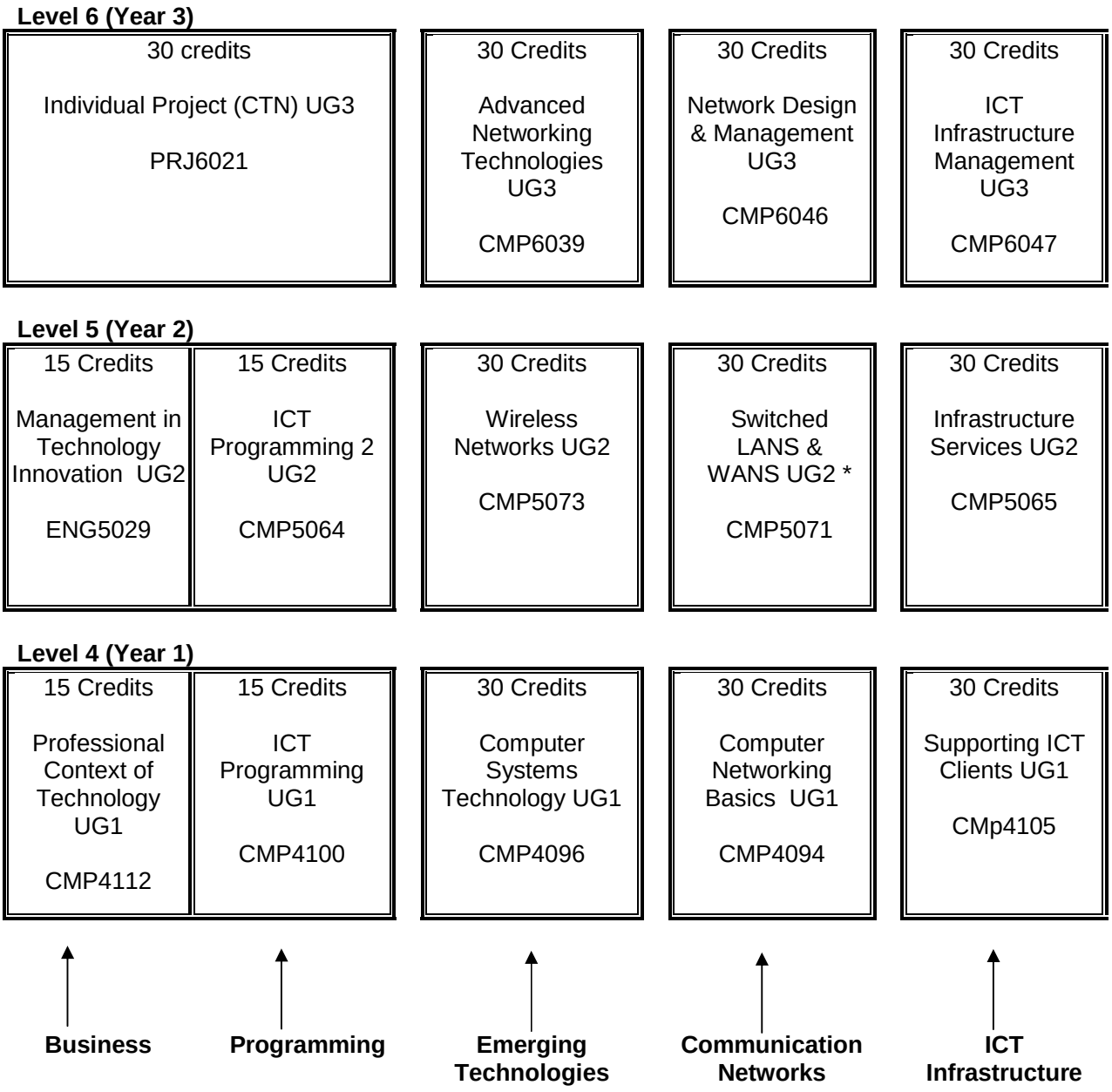
The use of information technology plays an active role throughout the course.

Assessment methods include practical projects, presentations, coursework, peer- and self-assessment.

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) Computer Networks



*Communication Networks UG2 (FM5084) 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 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) 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.