

Programme Specification [MSc Telecommunications]

(Postgraduate)

NOTE: This specification provides a concise summary of the main features of the programme 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 [Faculty web site address], (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.

The information from this specification may be selectively extracted and included in documents that are more appropriate for students, intending students and employers.

1	Awarding Institution / Body:	Birmingham City University
2	Teaching Institution:	Technology Innovation Centre
3	Programme accredited by:	N/A
4	Final Award:	MSc
5	Programme Title:	Telecommunications
6	Mode of study:	Distance learning
7	Language of study:	English
8	UCAS Code:	N/A

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

QAA Code of Practice (2) Collaborative provision and flexible and distributed learning (including e-learning).

Commercial telecommunications organisations and employers.

10 Aims of the programme

Overall the course aims to provide skilled professional telecommunications engineers who can provide and manage communications networks and services for commercial advantage.

The programme aims to provide learners with:

- a curriculum providing essential knowledge and understanding of telecommunication and data communications applied to mobile and wireless technologies.
- a course of study that will extend them intellectually and practically and provides the opportunity for students to reflect on their learning.
- the ability to plan, manage and implement telecommunication networks and services.
- the knowledge and skills to develop multidisciplinary approaches to the development of telecommunication networks and services including mobile/wireless communications.
- a range of technical challenges within the constraints and demands of an industrial or commercial environment.
- a flexible course of study that meets the market need for telecommunication engineers who design, implement and manage network systems and services.
- the project management and interpersonal skills required to liaise and work in project teams, structuring their work and meeting the varying demands placed on them; as they would in the work place.
- a course which will develop skills of analysis, synthesis, decision making and the ability to cope with new and unfamiliar practices.
- an opportunity to related practical real life problem based learning to industry and commercial and apply new technologies and techniques to solve present and future problems, in the UK and abroad.
- an opportunity to investigate how telecommunications networks and services are designed, developed and enhanced in order to provide competitive advantage and gain market share.
- a course which places emphasis on active learning including learning by doing, application and problem based learning.

- 11 Intended learning outcomes and the means by which they are achieved and demonstrated: the programme provides learners with opportunities to develop and demonstrate knowledge and understanding, skills and other attributes as follows:**

Knowledge and understanding

Knowledge and understanding of:	Teaching, learning and assessment methods used:
<p>A defined body of knowledge, skills and understanding and analysis of its relationships with conceptual frameworks and where appropriate, professional practice in industry and commerce.</p> <p>The essential skills of analysis, synthesis, decision-making and the ability to apply such to resolve project challenges and unfamiliar problems.</p> <p>Industrial standards of design, implementation and management of telecommunication systems.</p>	<p>Knowledge and understanding are acquired through rich media web based curricula and computer simulations.</p> <p>Distance learning mode of delivery with remote tutor support.</p> <p>Directed independent learning activities are encouraged at all stages of the course.</p> <p>There is a major emphasis on simulated and application of learning to reinforce and theory material, both supervised and unsupervised.</p> <p>Tutors and peers perform knowledge and competence assessment, this is both formative and summative. These include discussions, viva-voce, coursework, practical case studies, theory projects, written/online examinations, and practical assessments.</p>

Skills and other attributes

Intellectual / cognitive skills:	Teaching, learning and assessment methods used:
<p>Argue rationally and draw independent conclusions based on a rigorous, analytical and critical approach to demonstration and argument.</p> <p>Synthesise theory and practice to design/implement a range of</p>	<p>Intellectual skills are developed through teaching and learning programme previously outlined.</p> <p>Analytical and problem solving skills are further developed using a range of appropriate 'real' and 'theoretical' case-studies and problem</p>

<p>solutions.</p> <p>Assess and resolve issues relating to competing demands on resources.</p> <p>Write fully researched and referenced reports, which evaluate both technical and management issues. This will involve the use of a variety of IT and simulation tools.</p> <p>Apply new technologies and techniques to solve present and future industrial and commercial problems nationally and internationally.</p> <p>Use relevant analytical and modelling techniques to plan and complete a project.</p>	<p>based learning scenarios.</p> <p>All Themes require an element of written work, which will demonstrate the students' ability to apply the knowledge gained to a specific problem.</p> <p>Each theme will normally have two elements of assessment.</p> <p>Formative assessments and case studies are used to monitor progress and to feed this progress back to the student.</p> <p>Assessment can include practical work, individual written coursework, viva voce, reports, practical simulated assessments, closed and open book time constrained examinations.</p>
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<p>Practical, research and independent learning skills:</p> <p>Access information from the internet, journals, books, research papers and appraise its suitability for master's level research.</p> <p>Demonstrate the ability to work autonomously or as part of a group and accept responsibility for the action taken.</p> <p>Reflect on personal practice, attributes, both theory and practice and modify approach to maximise learning opportunities as required.</p> <p>Interpret and critically evaluate knowledge, concepts and ideas and/or forms of creative expression, to deliver a quality product or service.</p> <p>Comprehend and solve mathematical or analytical problems at a level required by the chosen course of study.</p> <p>Apply the knowledge, skills and methodologies of project management to the analysis and solution of complex problems.</p>	<p>Teaching, learning and assessment methods used:</p> <p>The acquisition of appropriate and transferable practical skills is central to the learning strategy of the programmes.</p> <p>Initiative and independence are fostered throughout, and develop incrementally as the course progresses.</p> <p>Emphasis is place on guided, self-directed and student-centred learning, with increasing independence of approach, thought and process.</p> <p>Learners are encouraged to plan their own work schedules and are required to meet strict deadlines.</p> <p>Learners will demonstrate their project management knowledge and capability.</p>
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<p>Possess a defined body of knowledge, skills and understanding and analyse its relationships with conceptual frameworks and, where appropriate, professional practice.</p> <p>Draw independent conclusions based on analysis of argument, opinion and data.</p>	<p>Learners will plan and execute a related dissertation requiring them to demonstrate their ability to apply the skills and knowledge to the solution of a practical problem or to an investigation into a research topic appropriate to the rationale of the course.</p>
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<p>Transferable / key skills:</p> <p>Elicit the co-operation of others and contribute to team goals.</p> <p>Manage time and prioritise workloads.</p> <p>Make effective oral and written presentations which are coherent and comprehensible to others.</p> <p>Access and make appropriate use of relevant mathematical, statistical and theoretical information.</p> <p>Use various forms of communication and expression, then to employ them selectively, appropriately and effectively according to the requirements of the solution.</p> <p>Plan and deliver an oral presentation, including viva-voce, lead discussion and facilitate arguments, in an eloquent and professional manner.</p> <p>Show confidence and self-awareness, reflect on own learning, and be self-reliant and constructively self-critical.</p>	<p>Teaching, learning and assessment methods used:</p> <p>Transferable/key skills are core to the learning strategy of the programme. They are pervasive, and are incorporated into themes and assessments as appropriate, for example; team-working skills are fostered through the use of group, task-based practical projects.</p> <p>Keeping logbooks and submitting self-assessment documentation in support of personal performance fosters self management and personal development.</p> <p>A comprehensive set of online distance learning materials encompassed in a bespoke Virtual Learning Environment (VLE) providing access to a range of resources and tutor/peer discussion and support. Learning materials will be accessible online, CD, printer or via mobile phone (PDA).</p> <p>Assessment methods include viva-voce, coursework, simulated practical projects, theory projects, and timed examinations.</p>
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12 Programme structure and requirements, levels, modules, credits and awards

The structure of the programme, the modules, levels and credit ratings, and the awards which can be gained are shown below.

MSc Telecommunications

Stage 1

Module number	Module name	Credit
	Project Management & Research Methodology	20
	Data Communications Systems	20
	Telecommunication Systems	20

Award: Postgraduate Certificate (60 credits of which at least 30 at level 7)

Stage 2

Module number	Module name	Credit
	Management of Network Services	30
	Mobile and Wireless Communications	30

Award: Postgraduate Diploma (120 credits of which at least 90 must be at level 7)

Stage 3

Module number	Module name	Credit
	Master's Project / Dissertation	60

Award: Master's Degree (180 credits of which at least 150 must be at level 7)

13 Support for Learning including Personal Development Planning

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:

A student handbook containing information relating to the University, **tic**, RDI and the themes of study.

A bespoke Virtual Learning Environment (VLE) consisting of:

- Comprehensive online distance learning materials containing, knowledge, cases studies, links to external resource, learning tasks, formative assessments and feedback.
- Online induction and quiz which must be passed before accessing learning materials
- Access to remote University library and journal search facilities
- Tutor and peer discussion forums
- Synchronous seminars opportunities
- All documentation relating to the course
- Examples of previous assessments
- Access to pastoral support
- Calendar of key dates to plan learning and assessment.

- Email and telephone correspondence with tutors and course coordinators
- Submission of all assessments via Turnitin
- Learning skills development sessions

14 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.

15 Methods for evaluation and improvement of quality and standards

Committees:

Course Committee
Board of Studies
Examination Board
Learning Management Committee (LMC)
Learning Quality Committee (LQC)
Faculty Board
Academic Quality and Support

Mechanisms for review and evaluation:

Review and validation events
Annual Monitoring
Student feedback questionnaires
Annual staff appraisal
External Examiners' Reports
Course team meetings and Away Days