Programme Title: BSc(Eng) Telecommunications Engineering with Management (Telecoms)

Programme Specification (UG)

Awarding body / institution:	QMUL and Beijing University of Posts and Telecoms (BUPT)
Teaching institution:	QMUL and BUPT
Name of final award and programme title:	BSc(Eng) Telecommunications Engineering with Management (Telecoms)
Name of interim award(s):	
Duration of study / period of registration:	4 years
QMUL programme code / UCAS code(s):	H6N2
QAA Benchmark Group:	Engineering, but benchmarks subsumed by UKSPEC
FHEQ Level of Award :	Level 6
Programme accredited by:	Institution of Engineering and Technology
Date Programme Specification approved:	
Responsible School / Institute:	School of Electronic Engineering & Computer Science

Schools / Institutes which will also be involved in teaching part of the programme:

Institution(s) other than QMUL that will provide some teaching for the programme:

BUPT

Programme outline

This is a comprehensive programme covering telecommunications underpinned by detailed mathematics and physics background. It includes all aspects from theory across all layers - physical to applications, with particular emphasis on digital and microprocessor systems design, microwave electronics and wireless communication technology which is seen as an important component of the modern telecoms scene and envisaged to be the key enabler for anyone, anything, anytime, anywhere communications. Telecommunications is the strength and raison d'etre of BUPT.
Management is an important component of this programme as all engineers will need some knowledge on this. Essential business management knowledge and skills integrated in this programme prepare students for future careers in telecom and other technology-driven companies at the global level.

In addition to the technology, the programme will also include the key skills aspects already incorporated into the other JP programmes that were specifically commended by the QAA, and accredited by the IET.

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Aims of the programme

The programme sets out provide graduates with:
- a solid fundamental knowledge about telecommunication, mathematics and computer sciences;
- an understanding of network design, signal processing and network planning principles;
- a knowledge of theory, methodology and techniques for communications network assessment and evaluation;
- a good overall understanding of telecoms theories and their applications as carried across telecommunications networks.

This programme will provide graduates with good employment opportunities covering the field of telecoms and related business and management. It combines the key skills in which QM excels together with the scientific rigour from BUPT.

What will you be expected to achieve?

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas:
• the ability to recall factual knowledge and the ability to apply it in familiar and unfamiliar situations;
• the ability to apply scientific, mathematical and software 'tools' to a familiar or unfamiliar situation;
• the ability to use Information Technology as a key tool pervading all aspects of Telecommunications and Management;
• the ability to understand practical issues concerning real systems (whether hardware or software);
• the ability to recognise insufficient existing knowledge and the ability to search for the necessary scientific, mathematical and
software 'tools' relevant to that particular issue;
• the ability to work as part of a team;
• the ability to manage time effectively;
• the ability to appreciate the financial background against which decisions are made in industry;
• the ability to show a certain level of reflection on the role of engineering in society;

and the following skills:
• the perceptive skills needed to understand information presented in the form of technical circuit-diagrams, flow-charts and high-level languages;
• the practical skills needed to implement a piece of hardware or software and to use laboratory test equipment;
• the analytical skills needed to verify the correct behaviour of a hardware or software system or component and to be able to identify faults;
• the design skills needed to synthesise a design (in hardware and/or software) from a specification (including the choice of the
best option from a range of alternatives), to implement the design and to evaluate the design against the original specification;
• the written and oral communication skills needed to present information, in particular written information, effectively;
• the critical reasoning skills needed to appraise a particular topic;

Context-based aims and objectives:
• to be able to explain the mathematical principles underpinning the telecommunication engineering discipline, such as digital circuit designs, electromagnetic theory, and communication systems;
• to be able to explain scientific principles such as modulation and de-modulation principles within communication systems;
• to be able to apply engineering knowledge such as network programming, process numerical calculations and human factors to the telecommunication engineering discipline;
• to be able to identify and apply key engineering principles (e.g. from the information theory) to the analysis of important telecommunication processes (digital designs, modulation, de-modulation, data transmission, etc.);
• to be able to analyse the advantages and limitations of various principles for analogue and digital system designs and radio propagation channel effects on the received signal quality;
• to be able to apply quantitative methods and computer software to solve telecoms engineering problems (e.g. processing of signals, etc);
• to be able to demonstrate the use of creativity to design solutions for practical business technology problems, and for the creation of telecom system design in response to a set task;

• to be able to identify issues and legal requirements in the practice of telecommunication engineering activities, such as safety issues; • to be able to discuss the need of ethical conduct in the practice of telecommunication engineering activities, for example current standards for data and copyright protection; • to be able to discuss and review codes of practice and telecommunication industry standards.

QMUL Model

The QMUL Model is an innovative teaching and learning initiative that will broaden opportunities for Queen Mary undergraduates within and beyond higher education, supporting them to plan and manage their ongoing professional development. The Model is firmly grounded in the core QMUL values of respect for, and engagement with, the local area and communities, with a distinctive focus on enabling students to make a positive societal impact through leadership in their chosen field. The Model is organised around the key themes of:

- networking
- multi- and inter-disciplinarity
- international perspectives
- enterprising perspectives.

Students are required to study QMUL Model modules to the value of at least 10 credits at each year of undergraduate study. Model modules may be 5, 10 or 15 credits. Model modules are indicated within this programme specification.

In your first year of study, the Model module will be core or compulsory and will be situated within your home School or Institute. In subsequent years, students will be strongly encouraged to study at least one Model module beyond their home discipline(s), which could, for example, be in another School / Institute or area of QMUL or undertaken as a module outside of QMUL.

If Model module information is not provided on this programme specification for all subsequent years of study, this will be identified as your studies continue.

Where a Model module elective can be selected from an approved group of Model modules, no guarantee can be provided that your first choice of Model module will be available.

Academic Content:	
A 1	[US1] Knowledge and understanding of scientific principles and methodology necessary to underpin their education in their engineering discipline, to enable appreciation of its scientific and engineering context, and to support their understanding of historical, current and future developments and technologies. US1 is covered in several year 1 and 2 modules of study to provide a solid foundation. Further year 3 and 4 modules, including telecommunications specific modules, cover US1 to reinforce understanding and to appreciate the application of scientific principles. For example, students will know and be able to explain scientific principles such as registers and memory units within microprocessor systems in EBU6335:(Digital System Design) and modulation and demodulation principles in (EBU6444: Communication System Electronics), as well as the methodologies to design and deploy internet applications over the network infrastructure (BBU6404: Internet Applications).

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A2	[US2] Knowledge and understanding of mathematical principles necessary to underpin their education in engineering discipline and to enable them to apply mathematical methods, tools and notations proficiently in the analysis and solution of engineering problems. US2 is covered in many modules across all years of study to understand the fundamentals such as mathematics and physics with particular emphasis being given in years 1 and 2 through modules such as: BBC4911 and BBC4922. US2 is also covered in Year 3 and 4 telecoms specific modules, such as: EBU6475 (Microprocessor Systems Design), EBU5042 (Advanced Network Programming) and EBU6444 (Communication Systems Electronics). For example, students will know and be able to explain the mathematical principles underpinning the telecommunication engineering discipline, such as Maxwell's equations, linear algebra, Fourier and digital cosine transforms.
A3	[EA1] Understanding of engineering principles and the ability to apply them to analyse key engineering processes. EA1 is covered in several modules with particular emphasis being given in years 3 and 4, including many telecoms specific nodules (EBU6335: Digital Systems Design, EBU6475: Microprocessor Systems Design; EBU5042: Advanced Network Programming, EBU6444: Communication Systems Electronics and EBU7250 Wireless Networks). For example, students will be able to identify and apply key engineering principles (e.g. from the information theory) to the analysis of important telecoms design and application processes.
A4	[EA3] Ability to apply quantitative methods and computer software relevant to the engineering discipline, in order to solve engineering problems. EA3 is covered in many modules across all years of study to provide knowledge on quantitative methods and computer software in telecommunications through a number of hardware and software labs. In years 3 and 4 for example, students will practice and apply quantitative methods and computer software (e.g. CPU Sim software in EBU6475: Microprocessor Systems Design) to solve computational/telecom engineering problems.
A5	[EA4] Understanding of a systems approach to engineering problems and to work with uncertainty. EA4 is covered in sevral modules with particular emphasis being given in years 3 and 4 through modules such as: BBU6404 (Internet Applications), EBU5302 (Telecoms Systems), EBU6335 (Digital Systems Design). For example, students will recognise and be able to use a systems approach (e.g. series of encoding processes) to telecom engineering problems.
A6	[D2] Understand customer and user needs and the importance of considerations such as aesthetics. D2 is covered in several modules. Particularly, the coursework of EBU5606 (Product Development and Marketing) covers marketing research and analysis to understand customer demands and address the importance of considerations such as aesthetics. Students will also be able to identify and discuss user needs in the creation of telecommunications engineering content (EBU6444: Communications Systems Electronics) and Internet Applications (BBU6404).
A7	[P6] Awareness of appropriate codes of practice and industry standards. Industry standards in relation to communication systems are explicitly covered in EBU5302 (Telecommunications Systems). Standards for Internet are covered in both EBU5403 (Internet Protocols) and BBU6404 (Internet Applications). Appropriate codes of practice also forms part of the EBC4000 and EBC5000 PDP modules.
A8	[P7] Awareness of quality issues. P7 is introduced through EBC5000 (PDP3). Students are made to be aware of quality issues, principles of quality systems and their application to the manufacture of engineering products. Design and Build project in EBC6010 (Engineering Environment) further addresses this LO by asking students to consider the quality issues in practice and apply it to system/product developed.

Disciplinary Skills - able to:	
B1	[US3] Ability to apply and integrate knowledge and understand of other engineering disciplines to support study of their own engineering discipline. US3 is covered by several modules distributed among all years of study. Particular coverage is given in EBU6606 (Product Development), EBC6010 (Engineering Environment) and EBU7250 (Wireless Networks). For example, students will be able to apply engineering knowledge such as network programming, process modelling and human factors to the telecommunication engineering discipline.

B 2	[EA2] Ability to identify, classify and describe the performance of systems and components through the use of analytical methods and modelling techniques. EA2 is covered in many modules across all years of study to provide concepts of system and components performance, and reinforce understanding through the use of analytical methods and modelling techniques in telecommunication systems. Through year 3 and 4 telecoms specific modules (EBU6335: Digital Systems Design, EBU6475: Microprocessor Systems Design and EBU5042: Advanced Network Programming) students will be able to use analytical methods to identify and appraise telecom systems components performance.
B 3	[D1] Investigate and define a problem and identify constraints including environmental and sustainability limitation, health and safety and risk assessment issues. D1 is covered in many modules with particular emphasis being given in years 2 and 3 through modules such as: EBU5606 (Product Development and Marketing) and BBU7031 (Business Technology Strategy). In telecoms specific modules such as EBU6335 (Digital Systems Design), EBU6475 (Microprocessor Systems) and EBU5042 (Advanced Network Programming), students will be able to analyse and appraise the requirements and constraints of a range of problems related to telecoms content and systems creation and deployment.
B 4	[D3] Identify and manage cost drivers. Cost drivers are addressed across year 2 to 4 in both business related modules and technical modules such as EBU5302 (Telecoms Systems).
B 5	[D4] Use creativity to establish innovative solutions. The creativity to establish innovative solutions is covered in many modules. For example, students will be able to demonstrate the use of creativity to design solutions for practical business technology problems, and for the creation of telecom systems in response to a set task (EBU7250: Wireless Networks and EBU6475: Microprocessor Systems Design).
B 6	[D5] Ensure fitness for purpose for all aspects of the problem including production, operation, maintenance and disposal. D5 is covered by several modules in years 2, 3 and 4. For example, students will be able to demonstrate their ability to ensure fitness for purpose of their productions, during a design and build project, and during the design and production of a microprocessor unit in Microprocessor Systems Design (EBU6475).
B 7	[D6] Manage the design process and evaluate outcomes. D6 is covered in several modules across all years of study. The design process is covered from software, hardware to wireless networks in telecommunication systems. The outcomes of these modules are assessed by coursework such as writing test report, programming assignment, multiple choice questions, etc. Students will also be able to demonstrate their ability to manage the design process and to evaluate their productions during a design and build project, and during the design and production of a microprocessor unit in Microprocessor Systems Design (EBU6475).
B 8	[P1] Knowledge of characteristics of particular materials, equipment, processes, or products. P1 is addressed by several modules. For example, it is covered in introductory / foundational modules such as BBC4102 (Introduction to Electronic Systems) where basic components of circuits, such as resistors and conductors are introduced. Telecoms students will also gain knowledge and practical experience with other modules, such as EBU7250 (Wireless Networks).
B 9	[P8] Ability to work with technical uncertainty. P8 is initially introduced in BBC4102 (Introduction to Electronic Systems) and BBC4922 (Physics). This LO is then addressed from a more practical perspective during the EBC6010 (Design and Build) and BBC6521 (final year project) where the construction of complex systems allows students to consider how to mitigate uncertainty, and to develop skills for scenario analysis and ability to identify credible options in Engineering context. Through EBU5042 (Advanced System Programming), students will also be able to demonstrate their ability to analyse various telecom probems and scenarios and identify the need for novel solutions.
B 10	To produce a coherent technical presentation in written or oral form; This is addressed from a more practical perspective during teh EBU5606 (Product Development and Marketing), EBC6521 (final year project) where students are expected to demonstrate their analysis/design/work through oral and technical presentations.
B 11	To present a coherent argument; This is addressed from a more practical perspective during the EBU5606 (Product Development and Marketing) and BBC6521 (final year project) where students are expected to demonstrate their analysis/design/work through oral and technical presentations.
B 12	To be able to acquire and apply knowledge in a rigorous way to new and unfamiliar situations; This is addressed from a more practical perspective during the EBU5606 (Product Development and Marketing), BBC6521 (final year project) where students are expected to demonstrate their solutions to a number of practical problems.
B 13	To be able to use quantitive data in analysis and synthesis in engineering problems. This is addressed from a more practical perspective during the BBC6521 (final year project), and telecom courses where students are expected to demonstrate their analysis/design/work through written tests.

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Attributes:	
C 1	[S1] Knowledge and understanding of commercial and economic context of engineering processes. S1 is covered by 3 modules across 3 years of study. The commercial and economic context of engineering processes in telecommunications are addressed in the business modules EBU5606 (Product Development and Marketing) and BBU7031 (Business Technology Strategy). This LO is also emphasised in the technical module EBC6010 (Engineering Environment (Telecom)). Students will be able to define and illustrate commercial and economic context of telecommunication engineering processes, thanks to case studies and discussions, and practical experience during a design and build project.
C 2	[S2] Knowledge of management techniques that may be used to achieve engineering objectives within that context. S2 is covered by 2 business modules in year 2 and year 3 respectively. In EBU5402 (Enterprise Management) students come across many management analytic tools which they can apply for decision making, project and operations management to achieve engineering objectives. This LO is also addressed in the Design and Build, an open ended group project which forms part of the EBC6010 (Engineering Environment (Telecom)) module.
C 3	[S3] Understanding of the requirement for engineering activities to promote sustainable development. S3 is covered by 3 modules. For example, corporate social responsibilities for sustainable development is covered in EBU5402 (Enterprise Management). PDP also covers this LO on ethical topics.
C 4	[S4] Awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk). S4 is covered across several modules, and explicitly covered in EBU5402 (Enterprise Management), EBU6304 (Software Engineering), EBC5000 (Personal Development Plan 3) and BBC6521 (Project), where students are required to submit a Risk Assessment. In EBU7250 (Wireless Networks), students will be able to identify issues and legal requirements in the practice of using the frequency and power transmission in various locations, it also covers other aspects such as safety issues.
C 5	[S5] Understanding of the need for a high level of professional and ethical conduct in engineering. S5 provides an excellent theme that is addressed within BBC3914 (English 1), BBC3923 (English 2) and BBC4104 (Communication Skills), where teams of students are required to present aspects related to social issues and ethics. It is also covered explicitly in EBC4000 and EBC5000 PDP lectures. Professional and ethical conduct in engineering is also covered in extra curriculum activities, such as the IET talk given by staff from the IET Beijing office.
C 6	[P3] Understanding of contexts in which engineering knowledge can be applied (e.g. operations and management, technology development, etc). P3 is covered in several modules specifically relating to engineering applications such as enterprise management and product development. Other modules bring out the LO directly within a coursework requirement where students need to consider manufacturing processes, planning control and product development as part of the assessment. Telecoms students will also be able to explain how and in which contexts telecommunication technology can be developed and deployed (covered in EBU6475: Microprocessor Systems Design and EBU7250 Wireless Networks).
C 7	[P4] Understanding use of technical literature and other information sources. For many modules P4 is a core part of the learning. Student have access to a vast number of books and electronic journals from which they complement their lectures and reference material for their coursework. For example, through EBU7250 (Wireless Networks), students will be able to discuss, review and summarise information from various resources including electromagnetic wave propagation technical literature , as required in projects and courseworks.
C 8	[P5] Awareness of nature of intellectual property and contractual issues. P5 is addressed in both English modules in year 1 and particularly covered by BBU4161 (Programming Fundamentals) where software intellectual property is explicitly introduced. The LO is also emphasised in EBU5606 (Product Development and Marketing) where students are made aware of Intellectual property rights.

QMUL Model Learning Outcomes - Level 4:	
D 1	

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QMUL Model Learning Outcomes - Level 5:	
E 1	

QMUL Model Learning Outcomes - Level 6:	
F 1	

QMUL Model Learning Outcomes - Level 7:	
G 1	

How will you learn?

All taught courses involve lectures, problem solving coursework, laboratory work, case study and independent study. Lectures are used to introduce principles and methods and also to illustrate how they can be applied in practice. Coursework allows students to develop their skills in problem solving and to gain practical experience. Laboratory work provide students with the guidance and help while solving a problem using a wide range of tools and techniques. This allows students to learn-by-doing in order to complement the lectures. QM Graduate Attributes are available for all JP students to identify students' attributes and develop students' knowledge, skills and behaviour that employers' value.

How will you be assessed?

The assessment of the taught course units takes place through a written examination and practical coursework. Some courses also include in-class tests as a component in assessment.

The final year project is examined on the basis of a written report, a formal oral presentation, and a demonstration of the piece of software or hardware developed by the student. In addition to the final year project, other modules introduce project and group working skills.

Examinations must contribute at least 70% of the overall marks to satisfy IET Accreditation.

How is the programme structured?

Please specify the full time and part time programme diets (if applicable). Please also outline the QMUL Model arrangements for each year of study. The description should be sufficiently detailed to fully define the structure of the diet.

Most modules are shown with a value of 15 credits. This is to simplify the procedure to fit the QM system. EBU modules are actually 44 contact hours instead of 33 so should count for more than 15 credits; BBx modules use Chinese credits that do not map exactly to QM credits. The exception is Personal Development Plan (PDP) which is 1.8. Engineering Environment is a mix of

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QM and BUPT modules that does not have any specific credits but counts 5% towards the award of Honours and exists in all JP modules, with a slightly different mix depending on programme; PDP counts towards Engineering Environment but does not have any real credits by itself, although it is shown on the transcript.
In addition there are more modules than in a degree in London in order to satisfy Chinese requirements - the module load is not symmetrical across semesters as the technical modules are balanced with the Chinese compulsory modules not shown.
All modules are taught in English and every module must be passed for a degree to awarded (Chinese regulations) - so are all shown as core.

JP programme has two parts: technical content and compulsory courses. The degree is awarded on the basis of the technical content, but the compulsory part must be passed to get a degree to comply with Chinese MoE requirements.

Only modules shown on the QM transcript counting towards the award of Honours are included; Chinese compulsory courses are not shown in detail, nor are short summer semester modules, but these must all be passed for the award of the degree so a pass/ fail module is included to allow that to be handled at QM.

Academic Year of Study FT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester	QMUL Model
English 1	BBC3914	15	3	Core	0	Semester 1	No
Advanced Mathematics 1	BBC4911	15	4	Core	0	Semester 1	No
Linear Algebra	BBC4913	15	4	Core	0	Semester 1	No
Personal Development Plan 1	EBC3000	1.8	3	Core	0	Semesters 1 & 2	No
Programming Fundamentals	BBU4161	15	4	Core	0	Semester 2	No
English 2	BBC3923	15	3	Core	0	Semester 2	No
Introduction to Electronic Systems	BBC4102	15	4	Core	0	Semester 2	No
Advanced Mathematics 2	BBC4921	15	4	Core	0	Semester 2	No
Physics	BBC4922	15	4	Core	0	Semester 2	No

Academic Year of Study FT - Year 2

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester	QMUL Model
Engineering Mathematics 2	BBC4111	15	4	Core	1	Semester 1	No
Electronic and Circuit Foundation	BBC4931	15	4	Core	1	Semester 1	No
Signals and Systems Theory	BBU5374	15	5	Core	1	Semester 1	No
Enterprise Management	EBU6402	15	6	Core	1	Semester 1	No
Communication Skills	BBC4104	15	4	Core	1	Semester 1	No
Personal Development Plan 2	EBC4000	1.8	4	Core	1	Semesters 1 & 2	No
Digital Circuit and Logic Design	BBU5202	15	5	Core	1	Semester 2	No
Introductory Java Programming	EBU4201	15	4	Core	1	Semester 2	No
Probability Theory and Stochastic Statistics	BBC4941	15	4	Core	1	Semester 2	No
Electric and Magnetic Fields	BBC4210	15	4	Core	1	Semester 2	No
Product Development	EBU6606	15	6	Core	1	Semester 2	No

Academic Year of Study FT - Year 3

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester	QMUL Model
Advanced Network Programming	EBU5042	15	5	Core	2	Semester 1	No
Telecommunications Systems	EBU5302	15	5	Core	2	Semester 1	No
Digital Systems Design	EBU5335	15	5	Core	2	Semester 1	No
Internet Protocols	EBU5403	15	5	Core	2	Semester 1	No

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester	QMUL Model
Digital Signal Processing	BBU6502	15	6	Core	2	Semester 1	No
Personal Development Plan 3	EBC5000	5	5	Core	2	Semesters 1 & 2	No
Microwave and Optical Transmission	BBU6366	15	6	Core	2	Semester 2	No
Software Engineering	EBU6304	15	6	Core	2	Semester 2	No
Internet Applications	BBU6404	15	6	Core	2	Semester 2	No
Microprocessor Systems Design	EBU6475	15	6	Core	2	Semester 2	No

Academic Year of Study FT - Year 4

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester	QMUL Model
Project	ECS625U	30	6	Core	3	Semesters 1 & 2	Yes
Engineering Environment (Telecom)	EBC6000		6	Core	All years	Semesters 1-3	No
Chinese Compulsory Topics	BBF7000		7	Core	All years	Semesters 1-3	No
Mobile and WLAN Technologies	ECS702U	15	7	Core	3	Semester 1	Yes
Microwave and Millimetrewave Electronics	ECS644U	15	7	Core	3	Semester 1	Yes
Business Technology Strategy	ECS728U	15	7	Core	3	Semester 2	Yes
Microwave and Millimetrewave Communications Systems	ECS645U	15	6	Core	3	Semester 2	Yes

What are the entry requirements?

Pass the minimum entry requirements for BUPT. As a national key university, all entrants to BUPT must score above the top line in the Chinese national entrance examinations. In addition, BUPT's requirement is much higher than that and the level is approximately equivalent to the top 2-3% of the population in China of that age group.

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How will the quality of the programme be managed and enhanced?

The JP operates an Academic Committee which is responsible under the contract and MoE licence for all matters relating to the delivery of taught programmes at school level including monitoring the application of relevant QM policies and reviewing all proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in this Committee's work in a number of ways, such as through student membership, or consideration of student surveys.

The JP operates an Annual Programme Review of the taught undergraduate provision. The process is normally organised with the Director and co-Director of JP who responsible for the completion of the school's Annual Programme Reviews. Schools/ institutes are required to produce a separate Annual Programme Review for undergraduate programmes using the relevant Undergraduate Annual Programme Review process. In addition BUPT conducts a biannual review of all programmes.

How do we listen to and act on your feedback?

The Staff-Student Liaison Committee (SSLC) provides a formal means of communication and discussion between QM and BUPT and JP students. The committee consists of student representatives from each year in JP together with appropriate representation from staff within the QM and BUPT. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. SSCLs meet twice a semester.

What academic support is available?

Induction and pastoral support is provided through BUPT. Students are organised into "classes" of 30 as in the usual Chinese model. Each class has a tutor who provides pastoral support. One male and one female tutor sleep on campus every night so there is 24/7 access to pastoral support.
Feedback mechanisms from students are: (i) directly to the lecturers (ii) to their tutor (as described above) and (iii) through an SSLC that meets twice a semester. Because of the large numbers of students, a separate SSLC is held for each cohort.
For every module, whether taught by QM or BUPT, formal office hour or tutorial slots are provided. In addition QM staff can give advice and supervision remotely using a variety of techniques including Skype, and the cloud-based GoToMeeting conferencing system.

Programme-specific rules and facts

The Special Regulations for the JP apply to this programme.

Specific support for disabled students

A specific disabled students support that complies with Chinese law is applied to this programme since the students are physically in China.

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Links with employers, placement opportunities and transferable skills

There is an industrial advisory committee consisting of senior staff from the Chinese Telecommunications industry. A dedicated Industrial Liaison Manager is part of the JP team to develop links with industry and industrial projects, to ensure that projects are appropriate and to monitor their progress. A good industrial project provides excellent experience for an engineering undergraduate. There is a compulsory internship for all year 3 summer students and frequent invited industry lectures to year 3 and 4 students.

To date the JP has a record of 100% employment or PG education.

In fact, most JP graduates (>80%) go on to PG education.

Programme Specification Approval

Person completing Programme Specification:	Yasir Alfadhl
Person responsible for management of programme:	Yue Chen
Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:	
Date Programme Specification approved by Taught Programmes Board:	

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