UNIVERSITY OF
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PROGRAMME SPECIFICATION

Course record information

Name and level of final award:	MSc Computer Networks with Security, MSc Computer Networks with Communications, MSc Computer Networks with Cloud Technologies *The above awards are masters degrees that are Bologna FQ-EHEA second cycle degree or diploma compatible.*
Name and level of intermediate awards:	Postgraduate Diploma Computer Networks Postgraduate Certificate Computer Networks
Awarding body/institution:	University of Westminster
Teaching Institution:	University of Westminster
Status of awarding body/institution:	Recognised Body
Location of delivery:	Cavendish Campus
Language of delivery and assessment:	English
Mode, length of study and normal starting month:	Full-Time (One year); Part-Time (Two-year); Part-Time (Three-year)
QAA subject benchmarking group(s):	Electronic Engineering Computer Science
Professional statutory or regulatory body:	IET/BCS
Date of course validation/review:	2015
Date of programme specification approval:	2015
Course Leader:	
Course URL: Westminster Course Code: JACS code: UKPASS code:	westminster.ac.uk/courses/postgraduate I120

Admissions requirements

There are standard minimum entry requirements for all undergraduate courses. Students are advised to check the standard requirements for the most up-to-date information.

For most courses a decision will be made on the basis of your application form alone. However, for some courses the selection process may include an interview to demonstrate your strengths in addition to any formal entry requirements.

More information can be found here: westminster.ac.uk/courses/postgraduate/how-to-apply

Aims of the courses

The overall aim of the networks suite of MSc courses is to provide an enriching learning experience, enhancing the knowledge and skill base of the participating students in the areas of networks, and communications. They are intended both for engineers in current practice and for fresh honours graduates to facilitate their professional development, mobility and employability.

More specifically, the generic aims of the courses are to:

G1. encourage a lively investigative spirit that will sustain a commitment to independent future study.

G2. provide communication skills associated with oral and written presentations of technical work and develop interpersonal and organisational skills associated with project planning, execution and appraisal.

G3. provide individualised experience of a significant individual project which exploits and applies disparate modules of knowledge.

G4. foster a spirit of independent student-centred study with effective management of time and development of research methods.

G5. provide a broad coverage of engineering topics that includes not only technical design issues but also a wider set of considerations including social and economic, ethical and environmental issues;

G6. develop teamwork skills by providing a framework of group activities.

Aims common to all courses in the networks suite

MSc Computer Networks with: /Security /Communications /Cloud Technologies

The common aims of the courses are to:

CN1. update and extend the students' knowledge and capabilities in the integration and use of interconnected computer systems.

CN2. produce Masters graduates possessing awareness, knowledge and practical skills in these fields by equipping them with advanced critical and evaluative disciplines coupled with analytical and creative problem solving abilities.

CN3. provide students with an advanced understanding of the assembly and interconnection of coherent groups of computer-based equipment into the networks and distributed computing systems that are needed in industry and commerce for many applications.

CN4. develop the students' ability to design, plan and implement such systems.

CN5. provide an in-depth understanding of routing and switching technologies.

CN6. develop skills in designing, testing and troubleshooting local and wide area networks.

MSc Computer Networks with Security

In addition, the MSc in Computer Networks with Security aims to produce postgraduates with an advanced understanding of modern network based systems with the integrated need of security including both the physical and software aspects of such interconnection with hands-on experience of the planning, implementation and maintenance of such systems. The course aims to prepare a student with specialist knowledge and skillset in key areas such as threat analysis, network security systems, cryptography, cybersecurity, penetration testing, wireless security and information security. In particular, the course aims to:

CNS1. assess confidentiality, integrity and availability in security terms;

CNS2. develop the ability to critically evaluate the threats and vulnerabilities of network systems and to provide, implement and integrate security strategies;

CNS3. develop the ability to critically evaluate and implement principles and practices used in modern day cryptography used to secure data and communication used in modern day computer network systems;

CNS4. explore current security tools used in penetration testing;

CNS5. provide hands on experience at configuring enterprise level security appliances such as firewalls, intrusion prevention systems and VPNs.

MSc Computer Networks with Communications

In addition, the MSc in Computer Networks with Communications aims to produce postgraduates with an advanced understanding of computer networks including both the physical and software aspects of such interconnection with hands-on experience of the planning, implementation and maintenance of such systems. The course aims to prepare a student with specialist knowledge and skillset in key areas such as network design, storage area networks, optical networking, network simulation, network redundancy and reliability. In particular, the course aims to:

CNC1. develop the ability to model the behaviour of modern day network systems to design and critically evaluate such systems at all levels of the OSI model;

CNC2. develop the ability to critically evaluate and integrate devices and components used for high speed fibre optical communication systems;

CNC3. explore the economic criteria that must be met so as to attain the best management of traffic at minimum cost;

CNC4. review commonly used network simulators, commercial and academic, their common and specific purposes and architectures;

CNC5. enable the student to apply a holistic understanding of networks and their applications in solving real world problems.

MSc Computer Networks with Cloud Technologies

In addition, the MSc in Computer Networks with Cloud Technologies aims to produce postgraduates with an advanced understanding of networks of computers with the use of Cloud based systems including both the physical and software aspects of such interconnection with hands-on experience of the planning, implementation and maintenance of such systems. The course aims to prepare a student with specialist knowledge and skillset in key areas such as cloud architecture, modelling tools, virtualisation, distributed systems, cloud services and management.

In particular, the course aims to:

CNCT1. develop the ability to define and implement fundamental concepts used for distributed based architectures and cloud based systems;

CNCT2. develop the ability to critically evaluate and analyse the associated architectures, management protocols and associated policies for cloud based systems;

CNCT3. provide a wide treatment of cloud computing that covers Infrastructure-as-a- Service, Platform-as-a-Service, Software-as-a-Service as the many integration and management components that are necessary to make these work together to fulfil business requirements;

CNCT4. develop technical solutions and strategies for cloud systems' management and operations;

CNCT5. provide experience in the design and implementation of distributed systems and to build applications in the cloud using platforms and toolkits such as Google App Engine, VMware Cloud Foundry, Microsoft Windows Azure,CloudSim, CloudBees, GigaSpaces.

Employment and further study opportunities

Today's organisations need graduates with both good degrees and skills relevant to the workplace, i.e. employability skills. The University of Westminster is committed to developing employable graduates by ensuring that:

- Career development skills are embedded in all courses
- Opportunities for part-time work, placements and work-related learning activities are widely available to students

- Staff continue to widen and strengthen the University's links with employers in all sectors, involving them in curriculum design and encouraging their participation in other aspects of the University's career education and guidance provision

- Staff are provided with up-to-date data on labour market trends and employers' requirements, which will inform the service delivered to students.

The subject areas covered within the three pathways in the networks suite of MSc courses offer students an excellent opportunity to enable the successful graduate to enter into these ever expanding, fast growing and dominant areas within the network engineering sector.

Skills in design, installation, configuration, optimisation, security and management of these networks are highly desirable. The demand for engineers has been rising steadily over the past few years and there are skills shortages for engineers in some areas such as cybersecurity and cloud computing.

Examples of possible career paths for graduates in the areas of networks are:

- Network Support Engineer
- Network Design Architect
- Network Manager
- Project Manager
- Security Auditor
- Network Security Architect
- Distributed Systems Engineer
- Teaching
- Research and Development

The list above is not prescriptive or exhaustive.

MSc Computer Networks with: /Security /Communications /Cloud Technologies

The unprecedented growth exhibited in the commercial and information management uses of the Internet and World Wide Web is really only the visible tip of the vast scientific, computing, technical and engineering developments that are occurring in these fields.

The new programming techniques and technological requirements of this rapidly developing field are terra incognita not only to many incumbents who are currently employed in the field but elude even many recent computer science graduates.

There is now a long-term and growing market for professionals possessing a clear overview of current information and communication networks capabilities, standards and trends along with a firm grasp of specifics in areas ranging from data network protocols to network security issues.

Whatever developments occur there will always be a need for the designer and engineer who has knowledge and experience both of the engineering and implementation of a distributed or network system and able to work at the higher levels of abstraction and programming of networked and distributed computing in both development and application. Graduates in any of the Computer Network based degrees will have the knowledge and skills to work in these rapidly developing fields.

Learning outcomes

General Learning Outcomes
Knowledge and understanding
Graduates will satisfy the following criteria:

GSa: they will be able to demonstrate their knowledge and understanding of essential facts, concepts, theories and principles pertaining to their area of engineering, and its underpinning science and mathematics. They will appreciate the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgement.

Specific skills

GSb: they will be able to apply appropriate quantitative science and engineering tools to the analysis of problems. They will be able to demonstrate creative and innovative ability in the synthesis of solutions and in formulating designs. They will be able to comprehend the broad picture and thus work with an appropriate level of detail.

GSc: they will possess practical engineering skills acquired through, for example, work carried out in laboratories; in project work; in design work; and in the use of computer software in design and analysis.

Key transferable skills

GSd: they will have developed transferable skills that will be of value in a wide range of situations. These skills include:

- The ability to exercise initiative and personal responsibility whilst working with others.
- The ability to plan self-learning and improve performance, as the foundation for lifelong learning
- The ability to communicate effectively through written reports and presentations and the ability to handle competently technical questioning.
- The ability to use effectively general IT and information retrieval facilities.
- The ability to develop, monitor and update a plan, to reflect a changing operating environment.
- The ability to monitor and adjust a personal programme of work on an on-going basis, and to learn independently;
- The ability to learn new theories, concepts, methods, etc and apply these to solve problems in unfamiliar situations.

Specific Learning Outcomes

1. **Science and Mathematics**

MSc Computer Networks with Security
Graduates will be able to demonstrate:

SM1fl a comprehensive understanding of the scientific principles and the mathematics involved in cryptographic techniques;

SM2fl an awareness of the limitations of security protocols and the threats they pose;

SM3fl a comprehensive knowledge and understanding of the goals of security and an appreciation of their limitations.

MSc Computer Networks with Communications
Graduates will be able to demonstrate:

SM1fl a comprehensive understanding of the scientific principles of communication networks and related disciplines;

SM2fl a critical awareness of the limitations of server hardware and the impact on performance;

SM3fl a comprehensive knowledge and understanding of mathematical and computer models relevant to network communications and performance, and an appreciation of their limitations.

MSc Computer Networks with Cloud Technologies
Graduates will be able to demonstrate:

SM1fl a comprehensive understanding of cloud architecture and services such as laaS (Infrastructure as a Service), PaaS (Platform as a Service) and SaaS (Software as a Service);

SM2fl a critical awareness of the security issues in cloud computing;

SM3fl a comprehensive knowledge and understanding of security and management strategies and a critical evaluation of these.

1. Engineering Analysis

MSc Computer Networks with Security
Graduates will be able to demonstrate:

EA1fl ability to analyse a problem related to security needs within an organisation and to apply security techniques to design and implement a security strategy and assess its limitations;

EA2fl ability to use fundamental knowledge to investigate new and emerging security threats, protocols and mitigation;

EA3fl ability to extract data pertinent to an unfamiliar problem, and apply in its solution using computer based engineering tools in gathering information during reconnaissance.

MSc Computer Networks with Communications
Graduates will be able to demonstrate:

EA1fl ability to breakdown a complex task to fundamental building blocks and apply knowledge of networks and communication to design a computer network architecture and assess its limitation; Simulate the operation of network and evaluate its performance to identify its limitations;

EA2fl ability to use fundamental knowledge to investigate new and emerging technologies impacting computer networks and digital communications;

EA3fl ability to collect and analyse data from network simulations to tackle performance issues in unfamiliar network configurations.

MSc Computer Networks with Cloud Technologies
Graduates will be able to demonstrate:

EA1fl ability to apply computer-based models for solving networking and distributed computing problems, and the ability to assess the limitations of particular cases;

EA2fl ability to apply use fundamental knowledge to investigate new and emerging cloud technologies;

EA3fl ability to collect and analyse data from simulations of a cloud architecture to investigate performance issues in unfamiliar design configurations.

2. Design

MSc Computer Networks with Security
Graduates will be able to demonstrate:

D1fl ability to use knowledge, understanding and skills to work with information that may be incomplete and use theory to mitigate deficiencies in designing a computer network security strategy;

D2fl wide knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations to design a security strategy;

D3fl ability to work independently to solve complex problems associated with the design of a secure system based on a given problem specification.

MSc Computer Networks with Communications
Graduates will be able to demonstrate:

D1fl ability to use knowledge, understanding and skills to work with information that may be incomplete and use theory to mitigate deficiencies in designing network layer addressing schemes and a complete network;

D2fl knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations in designing an enterprise network.

D3fl ability to work independently to solve complex problems associated with the design of an optimised computer network that implements a variety of network technologies.

MSc Computer Networks with Cloud Technologies
Graduates will be able to demonstrate:

D1fl ability to use knowledge, understanding and skills to work with information that may be incomplete and use theory to mitigate deficiencies with design of a cloud systems offering a variety of cloud services;

D2fl knowledge and comprehensive understanding of design processes and

methodologies and the ability to apply and adapt them in unfamiliar situations in designing a cloud system;

D3fl ability to work independently to solve complex problems associated with the design of an optimised cloud network that implements a variety of cloud services.

1. Economic, Legal, Social, Ethical and Environmental Context

MSc Computer Networks with: /Security /Communications /Cloud Technologies
Graduates will be able to demonstrate:

ET1fl ability to fully articulate the importance of high levels of professional and ethical conduct in engineering;

ET2fl ability to communicate an objective defence of the chosen design process taking into account commercial risk, codes of practice, safety requirements and the social impact of modern networked systems;

ET3fl ability to communicate an objective defence of the chosen business arguments taking into account commercial risk, codes of practice, safety requirements and the social impact of networked systems;

ET4fl ability to identify required resources and design processes that will ensure sustainable development;

ET5fl awareness of relevant regulatory requirements in the area of networked systems;

ET6fl ability to evaluate health & safety, commercial and environmental risks related to networked systems.

1. Engineering Practice

MSc Computer Networks with Security
Graduates will be able to demonstrate:

EP1fl an advanced level knowledge and understanding of network security appliances such as Intrusion Prevention Systems (IPS), packet filtering firewalls, stateful firewalls, proxy servers and Virtual Private Network (VPN) gateways;

EP2fl a thorough understanding of current practice in cryptographic techniques and its limitations, and some appreciation of likely new developments;

EP3fl ability to apply extensive knowledge and understanding of a wide range of design techniques and applicable technologies, along with the constraints they impose;

EP4fl understanding of different roles within an engineering team and exercise initiative and personal responsibility as a team member in a group project.

MSc Computer Networks with Communications
Graduates will be able to demonstrate:

EP1fl an advanced level knowledge and understanding of network components and subsystems including routers, switches, servers, access points, storage devices and transmission media;

EP2fl a thorough understanding of current practice in network design, implementation and management together with their limitations and some appreciation of likely new developments;

EP3fl ability to apply extensive knowledge and understanding of a wide range of design techniques and applicable technologies, along with the constraints they impose;

EP4fl understanding of different roles within an engineering team and exercise initiative and personal responsibility as a team member in a group project.

MSc Computer Networks with Cloud Technologies
Graduates will be able to demonstrate:

EP1fl an advanced level knowledge and understanding of a wide range of cloud system components including routers, switches, transmission media, firewalls, storage devices, servers and related software components.

EP2fl a thorough understanding of current practice in cloud design and security implementations together with their limitations and some appreciation of likely new developments;

EP3fl ability to apply extensive knowledge and understanding of a wide range of design techniques and applicable technologies, along with the constraints they impose;

EP4fl understanding of different roles within an engineering team and exercise initiative and personal responsibility as a team member in a group project.

Learning, teaching and assessment methods

Teaching and Learning

The taught portion of the courses is delivered in three highly concentrated 40 credit modules which we call learning modules. The teaching within these modules is delivered in the format of an industrial short course. This delivery style allows students to rapidly gain a full overview of the horizons of the subject matter and furthermore enables the student to achieve a state of relevant functionality without a great deal of elapsed time. This can be especially advantageous if the student is attending on an occasional basis, or has urgent needs of immediate skill in a given topic area at his/her place of work. Within the taught portion of each module there is adequate time given to “hands-on” practice of concepts and tools taught. Any assignments and exercises carried out within the taught portion of a module are meant to develop basic capability and, as such, serve as a useful vehicle for sharpening the skills baseline required for undertaking the portfolio of work. The ILP consists of a collection of short answer, long answer and open ended project based tasks that must be solved. In most cases, ILPs incorporate design or simulation activities alongside written problem solutions. The project based task within the ILP will require the student to exercise and use principles, concepts and technologies within the specialism of the module to design, implement and verify the operation of a complex real system. In some modules the project component maybe in the form of a group project whilst in other modules the project component maybe in the form of an individual project.

Each taught module is allocated 400 hours of study time. Out of this time 70 hours or 10

working days are allocated to the delivery of the taught portion of the module, 16 hours are allocated to additional tutorial sessions and the remaining 314 hours are allocated to the student to work on and complete the ILP. To enable the student to further practice and solidify their understanding of material taught and their abilities in using the relevant tool sets additional tutorials outside of the taught portion of the module are provided. These tutorials provide just in time practice sessions during the ILP period of the module. The ILP is where the remaining learning takes place, where abundant 'soak-time' to solve the portfolio of work described within the ILP package document is given. The performance of work carried out for the ILP can take place at the university, within the students place of work or at their home.

Assessment Methods

Assessment of Learning Modules

The assessment for the learning modules is formed by setting a portfolio of work known as an Independent Learning Package (ILP) that the student must complete. The ILP typically consists of short answer, long answer and open ended project based assignments and small tasks. The student must submit their completed ILP work in the form of an ILP report that will contain a critical, reflective and detailed description of the independent work carried out by the student and the results achieved by the student.

Unlike the tasks set in the ILP, exercises carried out in the taught portion of a learning module are meant to develop basic capability and, as such, serve as a useful vehicle for sharpening the skills baseline for undertaking the associated Independent Learning Package (ILP) – often through keen competition within the class. The taught portion of a module is not explicitly subject to assessment, whereas ILPs are.

Once the student submits the ILP report, an oral examination is held with an ILP Panel consisting of at least two staff members who will determine the level of student achievement.

After thorough scrutiny of the written evidence and hearing the oral defence, the Panel decides whether the outcome is a Pass with Distinction, Pass with Merit, Pass or Fail; this result then becomes a recommendation to the Assessment Board. The proceedings of the oral examinations are video recorded for External Examiners' perusal.

Students must achieve at least a pass to be awarded the credits for that module. Specifically the criteria used for assessment are the learning outcomes of each Learning Module.

Course structure

This section shows the core and option modules available as part of the course and their credit value. Full-time Postgraduate students study 180 credits per year.

Each of them consists of three taught modules (40 credits each) plus an individual project (60 credits)

MSc Computer Networks with Security

Credit Level 7				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
7NTCM010W	Computer Networks	Core	40	20
7NTCM011W	Security	Core	40	20
7ELEN016W	Project	Core	60	30
One from:				
7ELEN013W	Electronics	Option	40	20
7ELEN012W	Robotic and Control Systems	Option	40	20
7ELEN014W	Embedded Systems	Option	40	20
7ELEN015W	System-on-Chip Technologies	Option	40	20
7BIOT005W	Medical Instrumentation	Option	40	20
7NTCM012W	Communication Networks	Option	40	20
7NTCM013W	Cloud Technologies	Option	40	20
7NTCM008W	Telecommunications	Option	40	20
7NTCM007W	Digital Signal Processing	Option	40	20
7NTCM009W	Satellite and Broadband Communications	Option	40	20
7NTCM006W	Wireless Technologies	Option	40	20

MSc Computer Networks with Communications

Credit Level 7				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
7NTCM010W	Computer Networks	Core	40	20
7NTCM012W	Communication Networks	Core	40	20
7ELEN016W	Project	Core	60	30
One from:				
7ELEN013W	Electronics	Option	40	20
7ELEN012W	Robotic and Control Systems	Option	40	20
7ELEN014W	Embedded Systems	Option	40	20
7ELEN015W	System-on-Chip Technologies	Option	40	20
7BIOT005W	Medical Instrumentation	Option	40	20
7NTCM011W	Security	Option	40	20
7NTCM013W	Cloud Technologies	Option	40	20
7NTCM008W	Telecommunications	Option	40	20
7NTCM007W	Digital Signal Processing	Option	40	20
7NTCM009W	Satellite and Broadband Communications	Option	40	20
7NTCM006W	Wireless Technologies	Option	40	20

MSc Computer Networks with Cloud Technologies

Credit Level 7				
Module code	**Module title**	**Status**	**UK credit**	**ECTS**
7NTCM010W	Computer Networks	Core	40	20
7NTCM013W	Cloud Technologies	Core	40	20
7ELEN016W	Project	Core	60	30
One from:				
7ELEN013W	Electronics	Option	40	20
7ELEN012W	Robotic and Control Systems	Option	40	20
7ELEN014W	Embedded Systems	Option	40	20
7ELEN015W	System-on-Chip Technologies	Option	40	20
7BIOT005W	Medical Instrumentation	Option	40	20
7NTCM011W	Security	Option	40	20
7NTCM012W	Communication Networks	Option	40	20
7NTCM008W	Telecommunications	Option	40	20
7NTCM007W	Digital Signal Processing	Option	40	20
7NTCM009W	Satellite and Broadband Communications	Option	40	20
7NTCM006W	Wireless Technologies	Option	40	20

Please note: Not all option modules will necessarily be offered in any one year.

Academic regulations

The current Handbook of Academic Regulations is available at westminster.ac.uk/academic-regulations

How will you be supported in your studies?

Course Management

The Networks suite of MSc courses is delivered by the Department of Engineering.

Academic Support

Upon arrival, an induction programme will introduce you to the staff responsible for the course, the campus on which you will be studying, the Library and IT facilities, additional support available and to your Faculty Registry Office. You will be provided with the Course Handbook, which provides detailed information about the course. Each course has a course leader or Director of Studies. All students enrolled on a full-time course and part time students registered for more than 60 credits a year have a personal tutor, who provides advice and guidance on academic matters. The University uses a Virtual Learning Environment called Blackboard where students access their course materials, and can communicate and collaborate with staff and other students

Learning Support

The Academic Learning Development Centre supports students in developing the skills required for higher education. As well as online resources in Blackboard, students have the opportunity to attend Study Skills workshops and one to one appointments.

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at that site. Students[1] can search the entire library collection online through the Library Search service to find and reserve printed books, and access electronic resources (databases, e-journals, e-books). Students can choose to study in the libraries, which have areas for silent and group study, desktop computers, laptops for loan, photocopying and printing services. They can also choose from several computer rooms at each campus where desktop computers are available with the general and specialist software that supports the courses taught at their Faculty. Students can also securely connect their own laptops and mobile devices to the University wireless network.

Support Services

The University of Westminster Student Affairs department provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers, specialist advice for international students and the chaplaincy providing multi-faith guidance. The University of Westminster Students' Union also provides a range of facilities to support students during their time at the University.

How do we ensure the quality of our courses and continuous improvement?

The course was initially approved by a University Validation Panel in 2015. The panel included internal peers from the University, academic(s) from another university and a representative from industry. This helps to ensure the comparability of the course to those offered in other universities and the relevance to employers.

The course is also monitored each year by the Faculty to ensure it is running effectively and that issues which might affect the student experience have been appropriately addressed. Staff will consider evidence about the course, including the outcomes from Course Committees, evidence of student progression and achievement and the reports from external examiners, to evaluate the effectiveness of the course. Each Faculty puts in to place an action plan. This may for example include making changes on the way the module is taught, assessed or even how the course is structured in order to improve the course, in such cases an approval process is in place.

A Course review takes place periodically to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers. Students meet with review panels to provide feedback on their experiences. Student feedback from previous years e.g. from Course Committees is also part of the evidence used to assess how the course has been running.

How do we act on student feedback?

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways.

[1] Students enrolled at Collaborative partners may have differing access due to licence agreements.

- Through Course Committees students have the opportunity to express their voice in the running of their course. Student representatives are elected to Committee to expressly represent the views of their peer. The University and the Students' Union work together to provide a full induction to the role of the student representatives.

- Each Faculty also has its own Faculty Student Forum with student representatives; this enables wider discussions across the Faculty. Student representatives are also represented on key Faculty and university committees.

- All students are invited to complete a questionnaire before the end of each module. The feedback from this will inform the module leader on the effectiveness of the module and highlight areas that could be enhanced.

- The University also has an annual Postgraduate Taught Experience Survey or PTES which helps us compare how we are doing with other institutions, to make changes that will improve what we do in future and to keep doing the things that you value.

Please note: This programme specification provides a concise summary of the main features of the course and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. This specification should be read in conjunction with the Course Handbook provided to students and Module Handbooks, which provide more detailed information on the specific learning outcomes, content, teaching, learning and assessment methods for each module.