

PROGRAMME SPECIFICATION

Course record information

Name and level of final award:	MSc The <i>MSc in Business Intelligence & Analytics</i> is an MSc degree that is Bologna FQ-EHEA second cycle degree or diploma compatible.
Name and level of intermediate awards:	Postgraduate Diploma Postgraduate Certificate
Awarding body/institution:	University of Westminster
Status of awarding body/institution:	Recognised Body
Location of delivery:	Cavendish Campus, London, United Kingdom
Language of delivery and assessment:	English
Course/programme leader:	Prof. Thierry Chausalet
Course URL:	www.westminster.ac.uk/courses/subjects/business-information-systems/postgraduate-courses
Mode and length of study:	Full Time – 1 year Part-Time (Evening / Mixed) – 2 years minimum
University of Westminster course code:	W50
JACS code:	
UCAS code:	P004361 (FT & PT mixed) P046347 (PTE)
QAA subject benchmarking group:	Subject Benchmark Statement: Master's degrees in Computing, 2011, available online www.qaa.ac.uk/en/Publications/Documents/SBS-Masters-degree-computing.pdf
Professional body accreditation:	British Computer Society (BCS) TBC in Nov 2016
Date of course validation/review:	May 2016
Date of programme specification:	May 2016

Admissions requirements

The course builds on students' graduate competences and develops further their logical, analytical skills and technical in a way that they can be applied to Business Intelligence & Analytics problems. Consideration will be given to all applicants with a good Honours (normally 2.ii or above) degree from a British University or overseas equivalent in a discipline with significant IT and/or quantitative element. More specifically candidates will be expected to have a good first degree in either a scientific or engineering discipline with some exposure to the use of IT or an area of Computer Science/Information Technology, with a strong interest in quantitative analysis.

The course will also target individuals possibly without a formal degree, but already in employment where the problems they are charged with solving, or the decision-making they are required to support entail the Data Mining and Decision Support techniques and technologies deployed in the course. In summary, candidates will be expected to already have quantitative skills with an interest in developing these further to support postgraduate activity in analysing, evaluating and reporting on a range of real world data intensive problems. Due to the technical nature of the course, applicants whose first degree discipline is not in Computing, Economics, Science or Engineering and do not have a strong Computing or quantitative flavour will be considered only if they can demonstrate that they have sufficient, in the admissions tutor's opinion, knowledge of computing and quantitative techniques to complete the course.

All applicants are required to show competence in both written and spoken English; thus, overseas applicants whose first language is not English are normally required to have attained the equivalent of an IELTS score of at least 6.5 with 6.0 or above in each element prior to joining the course (more information on minimum scores for other language tests can be obtained for the admissions office).

All applicants are required to submit with their application, copies of their academic and/or professional qualifications and transcripts, two references (one of which should be academic, for applicants who have been in Higher Education in the 5 years prior to applying for the course), and a statement explaining the reasons they want to be admitted to the course, what they expect from the course, how they are going to achieve it, what they will bring to the course, what their career aspirations are and how they think the course can help them achieve those aspirations.

The admissions policy conforms to the Equal Opportunities Policy and the Admissions Policy of the University of Westminster. Each application is considered on its individual merits and decisions in admitting applicants to the course are made based on evidence that the applicant is likely to benefit from the course and to complete it satisfactorily.

Occasionally, applicants may also be asked to attend an informal interview with the Admissions Tutor that aims at establishing applicants' suitability for the course. For applicants living locally, these interviews may have the form of an invitation to one of the University's postgraduate information events, where applicants can meet members of the course team and the Admissions Tutor, ask questions and discuss any issues regarding the course. Alternatively, for applicants living further afield such interviews may be contacted over the phone or by teleconferencing.

Successful applicants with disabilities are contacted by the University of Westminster's Disability Support Co-ordinator and are asked to make an appointment with the University's Disabilities Officer, in order for the student to assess the University's facilities for disabled students. Following that meeting if it is deemed necessary a further discussion with the Course Leader may be appropriate to enable the applicant to make an informed decision.

All successful applicants are sent well before the start of the course more detailed information about module, timetable and an up-to-date reference list of textbooks that they can use to prepare for the course. Successful applicants, who are not practitioners in the field and/or who feel that they may need to do more preparation before the start of the course, are strongly advised to contact the Admissions Tutor or the Course Leader for advice.

Part-time students are expected to be in full-time employment; those attending in part time (mixed) mode must have the approval of their employers to attend the course, as they may be required to attend classes during work hours. Moreover, students are warned that a Master's programme of this type is by definition very intensive and it requires their total commitment if they are to be successful.

Aims of the course

The course provides a balanced study, which aims at producing graduates that are capable of:

- AIM1: thinking in a systematic and methodological way about Business Intelligence & Analytics issues;
- AIM2: utilising their problem solving skills and their knowledge of various techniques / tools / methods, to deliver Business Intelligence & Analytics solutions to a wide range of problems;
- AIM3: creating models and deploying appropriate software tools that satisfy specified requirements, and testing their use in a target domain;
- AIM4: studying the context within which the design of Business Intelligence & Analytics takes place, i.e. as part of the range of strategic, managerial and operational activities involved in the gathering, processing, storage and distribution of information;

- AIM5: identifying the security and legal implications of Business Intelligence & Analytics applications, e.g. Customer Relations Management (CRM);
- AIM6: independent in-depth analysis of a chosen topic making use of information resources outside a teaching environment.

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.

Employment

Typically graduates of the course will be employed as consultants, decision modelling or advanced data analysts, members of technical/analytics teams supporting the decision making of middle and top management in different sizes of organisation operating in diverse sectors. Graduates will be expected to work in PLCs (e.g. Prudential, Abbey, Glaxo-Wellcome, Unilever), retail head offices, the BBC, public sector organisations such as NHS and Primary Care Trusts, Civil Service Departments, and local councils, the host of banks, brokers and regulators that make up the City, along with all the specialist support consultancies in IT and market research and forecasting, all of whom use data for the full range of decision making.

Further Studies

MPhil/PhD in Operational Research, Data mining, and Business Intelligence at the University of Westminster or at other higher education institutions.

Learning outcomes

Learning outcomes are statements on what successful students have achieved as the result of learning. These threshold statements of achievement and are linked to the knowledge, understanding and skills that a student will have gained on successfully completing a course.

Knowledge and understanding

The Master's degree will be awarded to students who have demonstrated the ability to:

- KU1: Give a critical insight into practices and workings employed in the process of Data Mining and/or Decision Support;
- KU2: Place a real world Data Mining and/or Decision Support problem in the context of both business imperatives and current Business Intelligence/Analytics practices and make critical evaluations subject to business and organisational requirements;
- KU3: Identify and apply effectively appropriate Business Intelligence/Analytics techniques and software tools;
- KU4: Analyse new demands in Business Intelligence/Analytics and apply new/emerging technologies in the management of data and information resources that affect the operation and effectiveness of Business Intelligence/Analytics;
- KU5: Recognise those professional, legal, moral and ethical issues that are relevant to Business Intelligence/Analytics and work pro-actively with others to formulate solutions;
- KU6: Undertake the literature research necessary for in-depth study;
- KU7: Initiate and complete a major piece of individual study independently in a research or work-based environment.

A typical graduate of the course will be able to:

- deal with complex issues related to practices, workings and technologies employed in the process of developing and managing Database and Big Data Systems both systematically and creatively,

- make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level;
 - continue to advance their knowledge and understanding, and to develop new skills to a high level;
- and who will have the qualities and transferable skills necessary for employment requiring:
- the exercise of initiative and personal responsibility;
 - decision-making in complex and unpredictable situations; and
 - the independent learning ability required for continuing professional development.

Specific skills

On completion of the course, students will have developed the following subject-specific practical skills:

- SS1: ability to specify, design and construct fit for the purpose computer-based systems and components thereof using appropriate modelling techniques;
- SS2: ability to recognise risks that may be involved in the success/failure of Information Systems;
- SS3: use and application of various technologies, architectures and techniques / tools / methods (e.g. Data Warehousing, Data Mining, Distributed data management and technologies and architectures and appropriate middleware and infrastructures supporting application layers);
- SS4: appropriate knowledge of algorithms and quantitative techniques suitable for data analysis and mining in a broad range of application areas;
- SS5: ability to deliver solutions to real world problems associated with the ever evolving and changing nature of Information Technology infrastructure and increasing volume of data;
- SS6: appropriate knowledge of reflection on the impact technological advances have on nature and practices adopted within the Business Intelligence/Analytics practices and adapt to these changes;
- SS7: ability to embark on an independent in-depth analysis and/or study of any topic that may require the extensive use of a variety of information resources.

Key transferable skills

Upon completion of the course students will have developed a number of general rather than discipline-specific skills which any practitioner must have if s/he is to be successful. These Key Transferable Skills developed and assessed at postgraduate level are:

- KTS1: **Group working**
Students will be able to (a) work effectively within a group both as group leaders and/or group members; (b) clarify tasks and make appropriate use of group members abilities; (c) negotiate and handle conflict with confidence; and (d) participate effectively in the peer review process;
- KTS2: **Learning resources**
Students will be able to use a full range of learning resources to carry out literature reviews and engage in research activity;
- KTS3: **Self-evaluation**
Students will be able to reflect on own and others functioning; participate effectively in the peer review process and analyse and identify ways to improve practice; continue to advance their knowledge and understanding, and recognise their development needs and to develop new skills to a high level;
- KTS4: **Management of information**
Students will be able to competently undertake research tasks with minimum guidance; sieve through information clutter to identify relevance, to organise and present information effectively using different media;
- KTS5: **Autonomy**
Students will be independent and self-critical learner, who can act autonomously in planning and implementing tasks and who will be able to guide the learning of others;
- KTS6: **Communication**
Students can engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently;
- KTS7: **Problem solving**
Students have independent learning ability required for continuing professional study, making professional use of others where appropriate.

Some of these skills, such as Problem Solving skills and Communication skills, are intrinsic to the nature of the course and thus they have been assessed / developed by each and every assessment component. For other skills, like group working, effort has been made to be included in as many modules as possible because ability to work effectively with/within a group, to clarify/allocate tasks, negotiate load and resolve conflict are important skills that IT professionals involved in IS design should have.

Learning, teaching and assessment methods

Learning & Teaching

The learning strategies employed on the course vary depending on the module and the learning outcomes for each module. The delivery of most of the modules involves taught using traditional formal lectures and 'structured lectures', where lecturing is broken up by periods of student-led activity. The lectures are used to provide a firm grounding in the theory, methods and techniques relevant to the module's topic. Lectures are usually supplemented by further instructor led sessions, where theoretical or practical in nature problems are addressed. During these sessions students will attend problem solving workshops or practical classes, sometimes working alone, often working in smaller groups, sometimes working on paper, often working at a PC or workstation, always with a member of staff guiding the work or on hand to help resolve problems. The approach encourages students to actively participate, express their thoughts and get immediate feedback from peers and/or the instructor. To integrate the knowledge gained in individual modules common case studies, where possible, are used across modules, with each module tackling different aspects of the same problem.

The project is probably the most important aspect of the Master's programme. It plays a unifying role in the course by providing, in effect, the equivalent of a programme of integrated assignments which draws directly on all of the taught modules of the course. Students are expected to work on the project that is on a topic that each student has chosen, in the summer months after the end of the taught part of the course under the supervision of a member of academic staff. Generally, there are three types of projects: (a) projects proposed by students themselves (typically such projects are based on idea(s) a student has come up with that were developed following a supervisor input to an appropriate for the level and standard project); (b) projects based on an idea suggested by teaching staff that a student has researched and developed to an appropriate for the level and standard project; and finally (c) work-based projects, the latter of which, in most cases, are undertaken by part-time students.

To help students build the required background for their project and develop further their research skills, students are required to take a project preparatory module as part of which they are introduced to various project areas; choose the topic/area of their project; are allocated a project supervisor who, in most cases, has research interests in the area of a student's chosen project topic; research the area of their project; and devise a proposal detailed enough that will enable them to complete their project.

The supervisor acts in effect as someone who will guide students throughout the various phases of the project and who students will turn to in order to discuss their project work and receive feedback on the progress made and to have informed discussions on technical and research matters related to their project. Supervisors will also help students (a) decide on the scope of the project; (b) devise a project plan; (c) monitor their progress and adhere to target dates on provides; and (d) on how to tackle the writing up of the project report.

To support students in their studies and to allow access to module materials and course related information web-based teaching materials are used routinely. The modules' pages on the University's Virtual Learning Environment and/or the faculty's intranet pages are used as repositories for lecture notes, presentation transparencies, course/assessment schedules, coursework (including feedback) and occasionally for assessment purposes. The course recognises the importance of individuals being able to function equally well both as individuals and as members of team; thus, group activities are encouraged and promoted. To support and encourage student face to face interaction and collaborative work through exchange of emails, files, and online discussions, the facilities offered by the University's Virtual Learning Environment called Blackboard) are commonly utilised. A blended learning approach has also been adopted in a number of modules, there the face to face teaching is complemented by targeted online material that students can try outside classroom. Finally, in order to widen students' research background, expose them to a range of research topics enhancing at the same time their networking and continuing professional development ethos and skills, the course team proactively promotes internally or externally organised events that relate to the course and/or can be of interests to students and encourages them to participate. The events that are typically advertised include research talks, seminars, workshops most of which are organised and run by Specialist Interest Groups of professional societies (e.g. IET, BCS), other London Higher Education Institution and also informal

meetups organised and run by individual professionals working in the London area sharing certain common interests.

To summarise, teaching and learning strategies involve the use of

- case studies, to improve students’ analytical and problem solving skills;
- use of specialised software tools and packages, such as Development Environments and Computer Aided Software Engineering (CASE), to build students hands on skills and understanding of such tools;
- presentations from outside speakers with industrial experience, to enable students see how the taught material is applied in industry;
- team/group work, to enable students develop further their teamwork skills to work effectively in a professional environment;
- research methods involving the use of library and online sources to develop students research and analysis skills.
- presentations and academic report writing as part of the assignments set, to develop further these important skills.

Assessment

A number of the taught modules in the programme are entirely assessed through coursework, but the diet of assessment for a significant number of modules involves both a coursework and an examination component.

The approach taken in relation to assessment is that assessment is an integral part of the learning process; thus, assessment is designed to be fit-for-purpose in demonstrating the achievement of the specific module learning outcomes. The general principles governing assessment on the course are:

- a variety of assessment methods are employed fit-for-purpose to measure particular learning outcomes;
- the choice of assessment method(s) employed provides an opportunity for new learning and contributes to the learning process;
- timely and formative feedback is given for all assessments, including examinations;
- assessment is criterion-based, i.e. assessed work is marked using clearly stated assessment criteria, finally,
- in selecting assessment methods consideration is given to maintaining an acceptable and balance assessment loading.

Course structure

In order to be awarded a Master’s in *Business Intelligence and Analytics*, a student must pass modules worth at least 180 credits and attempt modules worth no more than 240 credits. The modules a student needs to pass to be eligible for the award of the MSc qualification are all level 7 modules and – include:

- all of the following core modules (120 credits):

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites	Exam	Course work
7BDIN006W	Big Data Theory and Practice	20	10	NONE	–	100
7BUIS024W	Business Analytics	20	10	NONE	–	100
7BUIS008W	Data Mining and Machine Learning	20	10	NONE	–	100
7BUIS019W	Research Methods and Professional Practice	0	0	NONE	–	100
7BUIS002W	Business Systems Postgraduate Project	60	30	Pass at least 100 credits incl. all the core modules	–	100

- and three of the following optional modules (60 credits):

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites	Exam	Course work
7BDIN005W	Advanced Big Data Analytics	20	10	NONE	50	50
7BUIS004W	Business Optimisation	20	10	NONE	50	50
7BDIN007W	Data Repositories Principles & Tools	20	10	NONE	–	100
7BUIS009W	Data Visualisation and Dashboarding	20	10	NONE	–	100
7BUIS010W	Data Warehousing and OLAP	20	10	NONE	50	50
7BUIS021W	Simulation Modelling: Risk, Processes, and Systems	20	10	NONE	–	100

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites	Exam	Course work
7BUIS025W	Web and Social Media Analytics	20	10	NONE	50	50
	Free Choice Module	20	10			

Please note:

- Not all option modules will necessarily be offered in any one year. The availability of modules depends on resources and on the numbers of students selecting a particular optional module.
- Although the Free Choice Module can be any postgraduate (level 7) 20 credit module offered by the Faculty, in practice students' options are limited in several ways; the free choice module has to be on a subject related to the students' programme of studies, it should not be dis-requisite / similar to a module of any of the core/optional modules listed above and/or prevent the student from taking any of the modules in his/her programme of studies. In any case, the Course Leader has to approve the proposed Free Choice Module before a student registers the module. Please also note that the Free Choice Module can be any of the core optional modules mentioned above.

Full time students are expected to complete the course within a calendar year, whereas students doing the course in part-time mode are normally expected to complete it over a two-year period. The above means that full time students cover the taught part of the course over the two semesters of an academic year and that they work on their project during the summer months of the same year. Part time students cover the taught part of the course over four semesters (two years) and that they are expected to work on their project during the summer months their second (last) year of their studies.

A number of taught modules in the programme are assessed entirely through coursework, but for a significant number of modules their diet of assessment involves both a coursework and an examination. Moreover, the coursework for the majority of modules involves a number of assessment elements that allow the thorough assessment of the associated learning outcomes.

To pass a module, students must achieve an overall mark of 50% in the module. In addition, and depending on the module's assessment diet, students must achieve at least 35% (qualifying mark) in the coursework and/or in the examination. In particular, in order to pass a module whose assessment diet involves a combination of coursework and exam, students in addition to achieving the pass mark overall, they must also achieve the qualifying mark in the exam and the coursework (on aggregate); in order to pass a coursework only assessed module, students are expected to achieve the pass mark overall and to also achieve the qualifying mark in each individual coursework component. Students, who fail to achieve the above, will be deemed as having failed the module and depending on their performance they may be offered a re-assessment opportunity.

At the discretion of the Assessment Board, a student may be re-assessed (re-sit) once only in any module other than the project module on each occasion that the student attempts the module. The following guidelines can affect potential re-assessments (in what follows the term assessment component should be understood as examination, coursework or grouping of assessment elements that the qualifying mark needs to be achieved, possibly on aggregate):

- If an overall mark of 50% or above is achieved and there is a particular component where a score of less than 35% is achieved, then the student will be deemed as not having passed the module and they may be offered a re-assessment in that component.
- If an overall mark between 40% and 49% is achieved, then the student may be offered reassessment in the components where they have not achieved the passing mark.
- If an overall mark of less than 40% is achieved, then regardless of the score of individual components the student may have to retake the module with attendance.

The table below summarises the above guidelines:

		Assessment Component Mark	
		< 35%	≥ 35%
Overall Mark	50% or above	Reassess	Pass
	Between 40%-49%	Reassess	Reassess
	Less than 40%	Retake	Retake

Academic regulations

The MSc in *Business Intelligence and Analytics* and its intermediate awards operate in accordance with the University's Academic Regulations and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland published by the Quality Assurance Agency for Higher Education (QAA) in 2008.

All students should make sure that they access a copy of the current edition of the general University handbook called Essential Westminster, which is available at westminster.ac.uk/essential-westminster. The following regulations should be read in conjunction with the Modular Framework for Postgraduate Courses and relevant sections of the current Handbook of Academic Regulations, which is available at westminster.ac.uk/academic-regulations.

Award

To qualify for the award of MSc in *Business Intelligence and Analytics*, a student must have:

- obtained a minimum of 180 credits at Level 7;
- attempt modules worth no more than 240 credits; and
 Note: A first attempt of any module will count as an attempt, and a re-attempt of any module that a student has failed will count as a further, separate attempt. Re-assessment following referral at the first sit will not count as a further separate attempt.
- satisfied the requirements contained within any course specific regulations for the relevant Course Scheme.

The University may award a Master's Degree with

- Merit to a student whose marks average at least 60% across modules at Level 7, or
- Distinction to a student whose marks average at least 70% across the modules at Level 7.

Intermediate Awards

These are awards that students are not normally registered for in the first instance. A student's registration may be changed to one of these exit awards, if a student has failed too many modules and cannot be considered for the target award s/he is registered for or a student claims such an award because s/he is withdrawing the course.

Postgraduate Diploma in Business Intelligence and Analytics

In order to be awarded a Postgraduate Diploma (PgDip) in *Business Intelligence and Analytics*, a student must pass modules worth at least 120 credits and attempt modules worth no more than 240 credits. The modules a student needs to pass to be eligible for the award of the Postgraduate Diploma (PgDip) in *Business Intelligence and Analytics* qualification are all level 7 modules and include:

- all of the following core modules (60 credits):

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites
7BDIN006W	Big Data Theory and Practice	20	10	NONE
7BUIS024W	Business Analytics	20	10	NONE
7BUIS008W	Data Mining and Machine Learning	20	10	NONE

- and three of the following optional modules (60 credits):

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites
7BDIN005W	Advanced Big Data Analytics	20	10	NONE
7BUIS004W	Business Optimisation	20	10	NONE
7BDIN007W	Data Repositories Principles & Tools	20	10	NONE
7BUIS009W	Data Visualisation and Dashboarding	20	10	NONE
7BUIS010W	Data Warehousing and OLAP	20	10	NONE
7BUIS021W	Simulation Modelling: Risk, Processes, and Systems	20	10	NONE
7BUIS025W	Web and Social Media Analytics	20	10	NONE
	Free Choice Module	20	10	

The University may award a Postgraduate Diploma with

- Merit to a student whose marks average at least 60% across the modules contributing to the award, where the Diploma is the target award rather than an intermediate award conferred following failure in one or more modules, or
- Distinction to a student whose marks average at least 70% across the modules contributing to the award, where the Diploma is the target award rather than an intermediate award conferred following failure in one or more modules.

Postgraduate Certificate in Business Intelligence and Analytics

In order to be awarded a Postgraduate Certificate (PgCert) in *Business Intelligence and Analytics*, a student must pass modules worth at least 60 credits and attempt modules worth no more than 240 credits. The modules a student needs to pass to be eligible for the award of the Postgraduate Certificate (PgCert) in *Business Intelligence and Analytics* qualification are all level 7 modules and include:

- all of the following core modules (60 credits):

Module Code	Module Title	UK Credits	ECTS	Pre/Co-requisites
7BDIN006W	Big Data Theory and Practice	20	10	NONE
7BUIS024W	Business Analytics	20	10	NONE
7BUIS008W	Data Mining and Machine Learning	20	10	NONE

The University may award a Postgraduate Certificate with

- Merit to a student whose marks average at least 60% across the modules contributing to the award, where the Certificate is the target award rather than an intermediate award conferred following failure in one or more modules, or
- Distinction to a student whose marks average at least 70% across the modules contributing to the award, where the Certificate is the target award rather than an intermediate award conferred following failure in one or more modules.

Support for students

Upon arrival, an induction programme will introduce students to the staff responsible for the course, the campus on which they will be studying, the Library and IT facilities and to the Faculty Registry. Students will be provided with the Course Handbook, which provides detailed information about the course. Students are allocated a personal tutor who can provide advice and guidance on academic matters.

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at their Faculty. Students 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.

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.

Student Affairs provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers and the chaplaincy providing multi-faith guidance. The Student Affairs Hub is located at 101 New Cavendish Street, Cavendish House (1st Floor), with an additional office located at the Harrow Campus. More information can be found at: westminster.ac.uk/study/new-students/when-you-arrive

The University of Westminster Students' Union also provides a range of facilities to support all students during their time at the University. For further information please visit uwsu.com

Reference points for the course

Internally

- The [University's Mission Statement](#)
- The University's [Quality Assurance and Enhancement Handbook](#)
- The University's [Handbook of Academic Regulations \(2015\)](#)
- [L & T Good Practice Guides](#) produced by Westminster Exchange
- [Learning & Teaching Guides for the Inclusive Curriculum for Disabled Students \(2009\)](#) produced by ICDS Project Team
- Outcomes and actions of the Curriculum and Assessment Enhancement Workshop
- Academic staff research interests in Big Data, Data Science, Database Systems, Database Languages, Systems Architecture, Data Warehousing, Data Mining, Information Knowledge Management, etc.

Externally

- QAA Characteristics Statement UK Master's Degree, September 2015, available online www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf
- QAA UK Quality Code for Higher Education Part A: Setting and Maintaining Academic Standards, The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies, October 2014, available online www.qaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf
- QAA Guidance on Contact hours to Institutions, 2011, available online www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/contact_hours.pdf
- QAA Guidance on contact hours to students , 2011, available online www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/contact-hours-student.aspx
- QAA, Subject Benchmark Statement: Master's degrees in Computing, 2011, available online www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/QAA386_Computing.pdf
- [The Benchmarking Standards for Taught Masters Degrees in Computing](#), 2008 sponsored by CPHC and BCS,
- BCS, [Guidelines on Course Accreditation – Information for Universities and Colleges](#), September 2015.
- SEEC Credit Level Descriptors 2001, Jan 2002.

Professional body accreditation

The predecessor course was accredited by British Computer Society, (BCS) as meeting the educational requirement for CITP Further Learning and partially meeting the educational requirement for CEug registration in all modes of attendance; the next BCS accreditation visit is in Autumn 2016. More information on BCS and membership paths can be found at www.bcs.org.

Quality management and enhancement

Course management

The Course Leader is responsible for the academic management and organisation of the course. The Course Leader, who is also the Admissions Tutor for the course, is assisted by an Examinations Officer and a Project Co-ordinator. The Course Team comprises the Course Leader and all the members of staff who teach on the course. Typically, each module is delivered by a module team. Each module has a Module Leader, who is responsible for co-ordinating the module team and for the delivery, resourcing and smooth running of the module.

Course approval, monitoring and review

The course was initially approved by a University Validation Panel in 1992, under the title MSc Decision Science, since then it has gone a number of reviews and revalidations the last of which was in 2016. The panel included internal peers from the University and external subject specialists from academia and industry to ensure the comparability of the course to those offered in other universities and the relevance to employers. Periodic course review helps to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers.

The course is 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 each Course Committee, evidence of student progression and achievement and the reports from external examiners, to evaluate the effectiveness of the course. The Annual Monitoring Sub-Committee considers the Faculty action plans resulting from this process and the outcomes are reported to the Academic Council, which has overall responsibility for the maintenance of quality and standards in the University.

Student involvement in Quality Assurance and Enhancement

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways. The most formal mechanism for feedback on the course is the Course Committee. Student representatives will be elected to sit on the Committee to represent the views of their peer group in various discussions. The University and the Students' Union work together to provide a full induction to the role of the Course Committee.

All students are invited to complete a Module Feedback 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 Student Experience Survey which elicits feedback from students about their course and University experience.

Students meet with review panels when the periodic review of the course is conducted to provide oral feedback on their experience on the course. Student feedback from course committees is part of the Faculty's quality assurance evidence base.

For more information about this course:

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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.

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