

Programme Specification 2019/20

6090 MSc Business Analytics and Finance

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton
Mode of study	Full time
Duration in years	1 full year (12 months)
Accreditation details	Advance Collegiate Schools of Business (AACSB)
Final Award	Master of Science
Name of award	Business Analytics and Finance
Interim Exit awards	Postgraduate Diploma, Postgraduate Certificate
FHEQ level of final award	7
UCAS code	N/A
QAA Subject Benchmark or other external reference	Business and Management
Programme Lead	Cristian Bravo
Date specification was written	01/09/ 2014
Date Programme was validated	03/06/2014
Date Specification last updated	27/4/2018

Programme overview

Brief outline of the programme

As the last few years have shown, making good decisions in finance and banking is critical to the well-being of the global economy. This Master's in Business Analytics and Finance provides learning in modelling techniques of Business Analytics which aid decision making, along with an understanding of how modelling techniques are used in finance and banking. A special feature of the programme is the summer project, which may be undertaken with a business or other external organisation, offering excellent career-building experience.

Your contact hours will vary depending on your module/option choices. Full information about contact hours is provided in individual module profiles.

The programme is accredited by the Association to Advance Collegiate Schools of Business (AACSB), which is an internationally recognised award of excellence in business education.

Special features of the programme

A special feature of the programme is the summer project which may be undertaken with a business or other external organisation, offering excellent career-building experience. Some projects are likely to be offered with financial institutions. These projects are assigned on a competitive basis conditional on academic performance throughout the program and a successful interview in the summer period. The program also includes an internal summer project as an alternative if it is preferred by the student or the requirements for an external project are not met.

Learning and teaching

Your understanding of the subjects covered and your ability to use the knowledge and skills gained will be enhanced through a variety of methods and strategies on the MSc Business Analytics and Finance course. Some of the key learning approaches that you will experience as a student in the Business School will include:

Group work: Group work provides you with the opportunity to meet and learn to work with many different people through these activities. This is recognised as vital in your development when looking forward to a management role in your future career.

Case-studies: Throughout this Master's degree in Business Analytics and Finance you will be presented with many different business case-studies that reflect the reality of decision-making and problem-solving activities in today's business environment. The case studies are selected to reflect the specific needs of your programme.

Learning alongside other students: This will involve you being part of a module that could have up to 180 or more fellow students. In this environment you may be given the opportunity to discuss a specific problem or complete a task in small groups.

Assessment

Assessment of achievement of the intended learning outcomes takes a variety of forms: coursework, examinations and a dissertation. As with all our programmes, formal examinations take place in January and May/June.

Educational aims of the programme

This programme is designed to provide training and education in the application of the underpinning concepts, techniques, methods and approaches of business analytics particularly in financial organisations and in financial modelling. The aims of the programme are:

- To meet the needs of financial organisations for numerate graduates with a broad spectrum of skills, ranging from technical mathematical modelling skills to more “people-based” management skills such as communication skills and teamwork.
- To provide a practical training in the application of the concepts, techniques, methods and approaches of business analytics and financial modelling.
- To give practical experience of applying the skills learned, by working on a project that may be based with an external organisation.
- To give an appreciation and understanding of the methods of research in financial modelling and business analytics sufficient to serve as a basis for undertaking research as part of the programme of study in the discipline.

Programme learning outcomes

A. Knowledge and understanding

Having successfully completed this programme you will be able to demonstrate knowledge and understanding of:

- A1. The practical skills and techniques that are required for the effective application of financial modelling and business analytics;
- A2. the skills required to critically evaluate business and management problems;
- A3. The decisions faced by financial organisations and the techniques and approaches that support the modelling and management of such decisions;
- A4. Business analytics practice in a manner characterised by a systemic view and the skills required to adopt mathematical modelling where appropriate.

Teaching and learning methods

You will gain an understanding and knowledge of the techniques and approaches of Business Analytics and Finance through a mixture of lectures, discussions, individual and group practical exercises, workshops, computer classes, case studies, seminars, reading, and assessed coursework. In particular, lectures and seminars will give you an understanding of practical techniques. Discussions, group work, reading, exercises and case studies will develop skills of critical evaluation and financial decision-making. Computer workshops, group work and exercise will enable mathematical modelling skills to be built up.

Assessment methods

Every module is assessed, typically by a combination of examination and coursework, although some modules are examined by examination or coursework only. Most assessments are individual, although some modules have a group work element. In particular, understanding and abilities in using practical skills will be assessed both by examination and coursework, as will ability to critically evaluate problems and make decisions. Some modules (e.g. Credit Scoring and Simulation) have a practical computer-based assignment, using commercial software, so that mathematical modelling skills can be assessed.

B. Subject specific intellectual and research skills

Having successfully completed this programme you will be able to:

- B1. apply core BA techniques particularly when problem solving in finance, including statistics, simulation, decision theory, systems theory, operations management and optimisation;
- B2. apply core financial mathematical models of portfolio analysis, credit risk models for both corporate and credit lending, interest rate curves, pricing of shares and their derivatives;

- B3.** think analytically, reflectively, creatively and logically, drawing on useful approaches developed in a wide range of cognate disciplines. These disciplines include information systems, organisational behaviour and risk management.

Teaching and learning methods

You will learn about and practise the techniques of Business Analytics and Finance through a mixture of lectures, individual and group practical exercises, workshops, computer classes, and private reading. Your reflective and creative skills are developed through exercises, coursework assignments and discussion groups. Your logical and analytical skills are developed through problem-solving activities and workshops.

Assessment methods

Your ability to apply the skills you have learnt is assessed by examinations and coursework. In particular, both examinations and coursework will assess your ability to apply both BA techniques and make effective use of financial models. Some technical skills are assessed by practical computer-based work. Reflective and creative thought will be assessed also through examinations and coursework, in some cases as group-written coursework.

C. Transferable and generic skills

Having successfully completed this programme you will be able to:

- C1.** collect and critically evaluate qualitative and quantitative information;
- C2.** communicate ideas and arguments fluently and effectively in a variety of written formats;
- C3.** communicate ideas and arguments orally and through formal presentations;
- C4.** work effectively in groups and recognise problems associated with group working;
- C5.** manage your time effectively;
- C6.** use computing and IT resources effectively;
- C7.** use library and other resources effectively, and apply bibliographical skills.

The project work, if based in an external organisation, typically involves liaising and contact with senior staff from the organisation. This enables you to develop your interpersonal and communications skills in a well regulated and structured way. For all projects, whether externally or internally based, significant report writing skills are developed in producing the final dissertation. At the end of an externally-based project you will make a formal presentation, usually to senior staff of the company or organisation, and you will be required write an executive summary suited to the company's needs.

Teaching and learning methods

Most modules develop some combination of the above key skills; and all will build skills through coursework in critical evaluation, written communication in some format and time management. Some modules will develop oral communication and group working skills through group work and presentations. Some will in particular increase IT skills through computer workshops while others will bring familiarity with library facilities through assessed coursework. The Induction programme, which is held before all modules start, will introduce presentation skills and management report writing which will be further developed in other modules.

The project work, if based in an external organisation, typically involves liaising and contact with senior staff from the organisation. This enables you to develop your interpersonal and communications skills in a well regulated and structured way. At the end of the project you will make a formal presentation, usually to senior staff of the company or organisation, and you will be required write a formal written report suited to the company's needs. The presentation is not assessed as part of the project. For all projects, external- or internally-based, significant report writing skills are developed in producing the dissertation.

Assessment methods

Some modules involve an assessed presentation to assess oral communication skills. Practical computer work will assess IT skills developed. Writing skills may be assessed either by individual or group work, often also assessing library and bibliographic skills. Many modules require the writing of a word-processed report in several different formats, which may be an academic essay or a management-style report. In all modules, strict hand-in deadlines will assess ability in time management

D. Subject specific practical skills

On successful completion of the entire programme, you will be able to:

- D1.** gain relevant and up-to-date knowledge of finance-oriented business analytics techniques and skills;
- D2.** gain relevant and practical knowledge of aspects of financial modelling;
- D3.** develop your modelling, technical and analytical skills, consultancy and business awareness skills;
- D4.** apply the methods, techniques and skills learned in the taught part of the programme to a project, typically based within an external organisation.

There is an emphasis on computing skills, using commercial software such as SAS.

Teaching and learning methods

You will gain understanding, knowledge and practice of up-to-date finance-oriented business analytics techniques through a mixture of lectures, seminars, case studies and computer workshops. Your financial modelling and analytical skills will be further developed through discussions, individual and group practical exercises, reading, and assessed coursework. In addition, you will be prepared for the project work by the Consultancy Skills module and additional lunchtime sessions run by the Industrial Liaison Officers in Semester 1 and 2. Your project will be supervised by a member of academic staff, who typically will have a research interest in the area of the project, as well as a representative of the organisation within which the project is located, if externally based.

Assessment methods

In addition to the assessment associated with the modules on the taught part of the programme, you are required to write a 15,000-word dissertation on your project work.

Programme structure

There are a range of compulsory and optional modules on this MSc in Business Analytics and Finance. Compulsory modules provide a balanced grounding in the skills of these disciplines. Optional modules provide opportunities to broaden understanding or to specialise in specific areas, such as risk management or forecasting.

Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

Programme details

The credit structure, showing European Credit Transfer Scheme (ECTS) points and Credit Accumulation Transfer Scheme (CATS) gained:

Semester	Module Type	ECTS points (CATS points)
Semesters 1 and 2	Compulsory and optional modules	60 (120)
Summer project	Core module	30 (60)

A flexible and inclusive approach to learning and teaching will enable any student who meets the entry requirements to access the curriculum and demonstrate achievement of all the intended learning outcomes. This approach should minimise the need for individual alternations to be made for disabled students; however, where reasonable, individual adjustments are likely to be needed this should be specified.

The first nine months of the programme are in 'taught' mode. This period is divided into two 14-week semesters, each followed by examinations. In the following description, the term "module" is taken to mean a discrete component of the programme with its own learning outcomes and assessment requirements. All modules are at Master's level.

The taught part of the programme consists of modules worth 60 ECTS points (120 CATS points) in total. The Business School provides all the compulsory modules, worth 45 ECTS points (90 CATS) in total. As for the optional modules, those with a MANG code are provided by the Business School, and those with a MATH code are by the Operational Research Group in Mathematical Sciences. The options are shared with the MSc in Operational Research and Finance, as well as other Master's programmes within the Business School. Due to timetabling restrictions, not all combinations of these options may be available in any given year.

There is a potential exit at the end of the taught part of the programme. Students who achieve a pass at PG Diploma level, and do not wish to undertake a dissertation, can exit at this point with the qualification PG Diploma in Business Analytics and Finance.

On successful completion of the taught part of the programme, a dissertation worth 30 ECTS points (60 CATS points) is undertaken during the final three months of the programme. All dissertations tackle relevant problems dealing with the topics covered during the preceding semesters, whether they be internal or external dissertations. Internal projects are much more theory- or research-oriented, while a part of these dissertations are set up with an outside organisation (external projects). The external project scheme is based on the concept of bringing together the taught elements to tackle a problem of genuine concern to the participating business or industrial organisation. The projects, assigned in a competitive basis subject to academic performance and successful interviews by the companies, are carefully vetted and agreed by the Business School's Industrial Liaison Officers and the Programme Leader before being presented to you.

Programme enrichment

Seminars: Speakers from a wide range of organisations provide insight into how business analytics and operational research is used in their organisation, and highlight areas that are of topical interest.

Full/Half-Day Workshops: One or more participating companies will run full or half-day workshops covering either a key skill such as teamwork or writing reports.

Project Skills sessions: Sessions will be provided on skills required for the summer projects. In addition, there is a teamworking session provided in addition to the standard School Induction programme.

Summary structure of the programme

See Appendix 3

Assessment mapping

See Appendix 2

Additional costs

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. Costs that students registered for this programme typically also have to pay for are included in **Appendix 4**.

Progression requirements

The programme follows the University's regulations for [Progression, Determination and Classification of Results: Standalone Masters programmes](#) as set out in the University Calendar.

Intermediate exit

You will be eligible for an interim exit award if you complete part of the programme but not all of it, as follows:

Qualification	Minimum overall credit in ECTA/CATS credits	Minimum ECTA/CATS credits required at level of award
Postgraduate Diploma	at least 60/120	45/90
Postgraduate Certificate	at least 30/60	20/40

Support for student learning

There are facilities and services to support your learning some of which are accessible to students across the University and some of which will be geared more particularly to students in your particular Faculty or discipline area.

The University provides:

- Library resources, including e-books, on-line journals and databases, which are comprehensive and up-to-date; together with assistance from Library staff to enable you to make the best use of these resources
- High speed access to online electronic learning resources on the Internet from dedicated PC Workstations onsite and from your own devices; laptops, smartphones and tablet PCs via the Eduroam wireless network. There is a wide range of application software available from the Student Public Workstations.
- Computer accounts which will connect you to a number of learning technologies for example, the Blackboard virtual learning environment (which facilitates online learning and access to specific learning resources)
- Standard ICT tools such as Email, secure filestore and calendars.
- access to key information through the MySouthampton Student Mobile Portal which delivers timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. while you are on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Hartley Library.
- Enabling Services offering support services and resources via a triage model to access crisis management, mental health support and counselling.
- Assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia)
- Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards
- Career Destinations, advising on job search, applications, interviews, paid work, volunteering and internship opportunities and getting the most out of your extra-curricular activities alongside your degree programme when writing your CV

- Other support that includes health services (GPs), chaplaincy (for all faiths) and 'out of hours' support for students in Halls (18.00-08.00)
- Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.

The Union Southampton provides:

- Academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education; Union Southampton provides training and support for all these representatives, whose role is to represent students' views to the University.
- Opportunities for extracurricular activities and volunteering
- Advice Centre offering free and confidential advice including support if you need to make an academic appeal
- Support for student peer-to-peer groups, such as Nightline.

Associated with your programme you will be able to access:

- All students are assigned a personal academic tutor who acts as a mentor and is available to offer both academic and pastoral advice. The Business School has an International Student Advisor to help international students with any specific difficulties. The Centre for Language Support provides additional support in the form of regular language tuition for students whose first language is not English.
- Additional computing facilities are available for MSc students in the Business School, over and above the standard facilities provided by the University Computing Services. The Library provides support in the form of study skills sessions, information sessions on accessing electronic databases, and a Librarian with special responsibility for the Business School.

Methods for evaluating the quality of teaching and learning

You will have the opportunity to have your say on the quality of the programme in the following ways:

- Completing student evaluation surveys for each module of the programme.
- Acting as a student representative on various committees, e.g. Staff: Student Liaison Committees, Faculty Programmes Committee or providing comments to your student representative to feedback on your behalf.
- Serving as a student representative on Faculty Scrutiny Groups for programme validation.
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty Scrutiny Group.

The ways in which the quality of your programme is checked, both inside and outside the University, are:

- Regular module and programme reports which are monitored by the Faculty
- Programme validation, normally every five years.
- External examiners, who produce an annual report
- A national Research Assessment Exercise (our research activity contributes directly to the quality of your learning experience)
- Higher Education Review by the Quality Assurance Agency for Higher Education
- At the end of every module in the programme you will be asked to complete an anonymous student questionnaire, to which the lecturer is required to respond;
- A representative from each MSc programme provided by the Business School is nominated as a member of the Staff-Student Liaison Committee, to enable student views to be heard.
- You can discuss matters in confidence with the Programme Leader, or alternatively with the Senior Tutor if you prefer

Career opportunities

Graduates of the MSc in Business Analytics and Finance have exciting career prospects in a wide variety of financial, business and government organisations. Recent graduates, for example, are pursuing careers in the Bank of England, Home Credit China and the National Health Service.

External Examiner(s) for the programme

Name: Prof Neil Kellard

Institution: University of Essex

Students must not contact External Examiner(s) directly, and external examiners have been advised to refer any such communications back to the University. Students should raise any general queries about the assessment and examination process for the programme with their Course Representative, for consideration through Staff: Student Liaison Committee in the first instance, and Student representatives on Staff: Student Liaison Committees will have the opportunity to consider external examiners' reports as part of the University's quality assurance process.

External examiners do not have a direct role in determining results for individual students, and students wishing to discuss their own performance in assessment should contact their personal tutor in the first instance.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook (or other appropriate guide) or online at <https://www.sbs.ac.uk/>

As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration; however, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our [Disclaimer](#) to see why, when and how changes may be made to a student's programme.

Programmes and major changes to programmes are approved through the University's programme [validation process](#) which is described in the University's Quality handbook.

Revision History

1. Validated 17/09/14
2. Transferred to new template 26/09/15
3. Transferred to new template 27/02/17
4. Removed Admissions information 27/4/2018
5. Learning Outcomes Grammar reviewed in relation to University template 27/4/2018
6. Programme leader updated 21/08/2018

Appendix 1

6090 MSc Business Analytics and Finance learning outcomes mapping document

Core (Cr) & Compulsory Modules (Cm)	Knowledge & Understanding				Subject specific Intellectual			Transferable skills							Practical skills			
	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4
MANG6008 Quantitative Research in Finance (Cm)	X	X	X	X	X		X	X	X			X	X		X	X		
MANG6022 Corporate Finance 1 (Cm)			X			X		X	X		X	X	X			X		
MANG6046 Optimisation and Decision Modelling (Cm)	X	X		X	X		X	X	X		X	X	X		X		X	
MANG6054 Credit Scoring & Data Mining (Cm)	X	X		X	X		X	X	X			X	X		X		X	
MANG6122 Simulation (Cm)	X	X		X	X		X	X	X			X	X		X		X	
MANG6142 Introduction to Portfolio Management & Exchange Traded Derivatives (Cm)			X			X		X	X		X	X	X			X		
MANG6231 Software for data analysis and modelling (CM)	X							X	X			X	X			X	X	
MANG6095 Dissertation (Cr)	X	X			X		X	X	X	X		X	X	X				X

Appendix 2

6090 MSc Business Analytics and Finance assessment mapping document

Module Code	Module Title	Assessment 1	Assessment 2	Assessment 3
MANG6008	Quantitative Research in Finance (Cm)	Group Empirical Project (4,000 words) 30%	Exam (2 hours) 70%	
MANG6022	Corporate Finance 1 (Cm)	Group Coursework (4,000 words) 30%	Exam (2 hours) 70%	
MANG6046	Optimisation and Decision Modelling (Cm)	Group Project (2,000 words) 40%	Exam (2 hours) 60%	
MANG6054	Credit Scoring & Data Mining (Cm)	Coursework (2,000 words) 100%		
MANG6122	Simulation (Cm)	Coursework 50%	Essay 50%	
MANG6142	Introduction to Portfolio Management & Exchange Traded Derivatives (Cm)	Group Assignment (3,000 words) 30%	Exam (2 hours) 70%	
MANG6095	Dissertation (Cr)	Dissertation (15,000 words) 100%		
MANG6231	SAS software for data analysis and modelling (Cm)	Report - SAS Program and Data Analysis (2,000 words) 100%		

Appendix 3

6090 MSc Business Analytics and Finance programme structure

Students should choose Option modules totalling 15 ECTS /30 CATS.

MANG6239 Behavioural Finance and MANG6020 Financial Risk Management require Programme Leader approval. All Option modules are offered subject to availability and timetabling constraints.

MANG6095 Dissertation supervision starts in Semester 2 and should be submitted in September 2019.

Semester 1				Semester 2			
Modules	ECTS	CATS	Core, Compulsory or Option	Modules	ECTS	CATS	Core, Compulsory or Option
MANG6022 Corporate Finance 1	7.5	15	Comp	MANG6095 Dissertation	30	60	Core
MANG6046 Optimisation and Decision Modelling	7.5	15	Comp	MANG6008 Quantitative Research in Finance	7.5	15	Comp
MANG6122 Simulation	7.5	15	Comp	MANG6054 Credit Scoring & Data Mining	3.75	7.5	Comp
MANG6142 Introduction to Portfolio Management & Exchange Traded Derivatives	7.5	15	Comp	MANG6231 Software for Data Analysis & Modelling	3.75	7.5	Comp
MANG6239 Behavioural Finance *	7.5	15	Option	MANG6020 Financial Risk Management *	7.5	15	Option
				MANG6023 Corporate Finance 2	7.5	15	Option
				MANG6038 Knowledge Management & Business Intelligence	7.5	15	Option
				MANG6100 Game Theory For Business	3.75	7.5	Option
				MANG6169 Credit Risk and Banking Regulation	3.75	7.5	Option
				MANG6292 Operations Management	3.75	7.5	Option
				MANG6293 Project Management	3.75	7.5	Option
				MATH6011 Forecasting	3.75	7.5	Option
				MATH6017 Financial Portfolio Theory	3.75	7.5	Option
				MATH6146 Revenue Management	3.75	7.5	Option
				MATH6005 Introduction to Python	3.75	7.5	Option

Appendix 4

6090 MSc Business Analytics and Finance additional costs

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. In addition to this, students registered for this programme typically also have to pay for the items listed in the table below.

In some cases you'll be able to choose modules (which may have different costs associated with that module) which will change the overall cost of a programme to you. Details of such costs will be listed in the Module Profile. Please also ensure you read the section on additional costs in the University's Fees, Charges and Expenses Regulations in the University Calendar available at www.calendar.soton.ac.uk.

Main Item	Sub-section	PROGRAMME SPECIFIC COSTS
Approved Calculators		Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. The University approved models are Casio FX-570 and Casio FX-85GT Plus. These may be purchased from any source and no longer need to carry the University logo.
Stationery		You will be expected to provide your own day-to-day stationary items, e.g. pens, pencils, notebooks, etc). Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.
Textbooks		Where a module specifies core texts these should generally be available on the reserve list in the library. However due to demand, students may prefer to buy their own copies. These can be purchased from any source. Some modules suggest reading texts as optional background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.
Printing and Photocopying Costs		In most cases, written coursework such as essays; projects; dissertations are submitted online and by hard copy. The costs of printing a hard copy for submission of such coursework will be the responsibility of the student. The cost of photocopying will also be the responsibility of the student. https://www.southampton.ac.uk/isolutions/students/printing
Optional Visits		Some modules may include optional visits. You will normally be expected to cover the cost of travel and admission, unless otherwise specified in the module profile.