

## Programme Specification

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### Business Analytics (2020-21)

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	3
Accreditation details	Association to Advance Collegiate Schools of Business (AACSB) Chartered Institute of Management Accountants (CIMA)
Final award	Bachelor of Science with Honours (BSc (Hons))
Name of Award	Business Analytics
Interim Exit awards	Certificate of Higher Education (CertHE) Diploma of Higher Education (DipHE)
FHEQ level of final award	Level 6
UCAS code	N100
Programme Code	6044
QAA Subject Benchmark or other external reference	General Business And Management 2007, Master's Degrees In Business And Management 2007
Programme Lead	Maxwell Chipulu
Pathway Lead	

### Programme Overview

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#### Brief outline of the programme

This course is part of Southampton Business School's undergraduate management portfolio. The portfolio is a collection of dynamic and innovative programmes which seek to provide you with theoretical and practical insight into past, current and future business issues. The portfolio engages with contemporary global issues and provides you with the opportunity to develop your business skills to ensure you are well equipped to enter industry, and ultimately lead organisations in the future. The portfolio's programmes share a common year to introduce you to core skills, analytical techniques, theories and perspectives. You then have the flexibility to select one of our leading programmes and to specialise in subjects of your interest which will enable you to follow your chosen career path.

Business Analytics is a relatively new discipline that helps organizations make sense of the huge amount of data that is being collected through a variety of sources such as web and social media. It uses a combination of mathematics and data analysis techniques to uncover information in the data, enabling organizations to improve their operational efficiency and customize their products, services, and their prices based on customers' priorities.

Hence, if you like maths, interested in web and social media and would like to know how they are used for creating value, this is the right program for you. Many companies have already felt the need for business analytics and are recruiting people with the right skills, and many more are expected to follow. As such there are high employability prospects for graduates.

This three year program will train you in using traditional and contemporary data management systems, in

particular the widely used analytics package SAS, and give you the mathematical skills needed for decision making informed by data analysis. You will also learn a range of qualitative skills required for successful problem formulation and problem solving as well as strategy implementation. Due to the strong links that the management science group has with private and public organizations, the modules have strong practical focus, often using real case studies and databases.

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.

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

### **Learning and teaching**

A range of teaching and learning methods will be utilised to ensure that the learning outcomes have been achieved. Learning activities will include:

- Lectures and Tutorials;
- Group and Individual Assignments;
- Computer Labs;
- Class debates and discussions;
- Private Study;
- Use of online materials;
- Assignments involving 'real world' organisations;
- Simulations.

Class activities and problem solving exercises will enable you to gain feedback about your knowledge and understanding, prior to any formal summative assessments. Learning activities which involve working with real organisations will enable you to see how business analytics operates in a commercial context, while providing the opportunity to practice workplace relevant skills. In addition, all students have the opportunity to contact academics during term time to discuss matters relating to the learning, teaching and assessment on a module.

### **Assessment**

A range of assessment methods are used on this programme to enable you to demonstrate your achievement of the intended learning outcomes, including:

- Individual written examinations;
- Individual written assessments, including reports and essays;
- Group work exercises, presentations, web-based material and reports;
- Business simulations;
- Reflective reports.

The final year includes a double-weighted project, where you will have the opportunity to apply the skills you learnt during the program on a real dataset. As a guide, it is aimed that written coursework will be returned within 3 working weeks.

## **Special Features of the programme**

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Students will be prepared to take the SAS Base programming certification exam. Some modules will involve visiting speakers, where possible, and the opportunity to complete assessment tasks which have been developed with businesses and other organisations.

**Please note:** 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](#).

## **Educational Aims of the Programme**

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The aims of the programme are to:

- Provide you with a detailed understanding of the key concepts and theoretical frameworks in business in general, and in business analytics in particular;
- Raise awareness of the latest trends in business in general, and in business analytics in particular;
- Provide you with insight into how business analytics operates in 'real world' contexts;
- Provide you with the precise set of skills and capabilities needed by industry and academia for exploiting data opportunities;
- Provide you with the opportunity to develop confidence and skills in managing, analysing, interpreting, and communicating large datasets;
- Offer a fresh and stimulating approach to mathematical decision making through integration with data and data analysis;
- Develop key business skills which are important in developing your career.

### **Graduate Attributes**

Graduate Attributes are the personal qualities, skills and understanding you can develop during your studies. They include but extend beyond your knowledge of an academic discipline and its technical proficiencies. Graduate Attributes are important because they equip you for the challenge of contributing to your chosen profession and may enable you to take a leading role in shaping the society in which you live.

We offer you the opportunity to develop these attributes through your successful engagement with the learning and teaching of your programme and your active participation in University life. The skills, knowledge and personal qualities that underpin the Graduate Attributes are supported by your discipline. As such, each attribute is enriched, made distinct and expressed through the variety of learning experiences you will experience. Your development of Graduate Attributes presumes basic competencies on entry to the University.

## **Programme Learning Outcomes**

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### **Knowledge and Understanding**

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On successful completion of this programme you will have knowledge and understanding of:

- A1. Key theoretical and contemporary issues surrounding business in general and business analytics in particular;
- A2. Knowledge and critical understanding of investigative techniques in business analytics;
- A3. The value of data to businesses, consumers and the economy as a whole, and the major mechanisms through which value is created from data;
- A4. Different types of business analytics techniques and their roles in releasing the value of data.

### **Teaching and Learning Methods**

A range of teaching and learning methods suitable for building a well-structured knowledge base will be used. A1 will be achieved through a series of lectures and case studies, while A2 and A3 will be met through discussions, simulations, seminars, private study, individual and group exercises. Both real and illustrative case studies will be used to motivate topics, and facilitate learning and discussion. There will be high emphasis on formative feedback and student discussion assisted by education technology. A4 will be achieved through a mixture of online multimedia material, seminars and principally an individual final year project.

### **Assessment Methods**

Knowledge and understanding, strategies, concepts and management practices are assessed in each module. A1- A3 will be assessed through a combination of coursework, presentations, and examinations. Some modules have a group work element where marks are awarded as a group, but the larger percentage, or the entirety of a module, will be assessed by an individual's work. A4 is assessed primarily through an individual research project. Feedback is also provided throughout the programme based upon student contribution to activities through practical exercises and discussions in class.

## Subject Specific Intellectual and Research Skills

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On successful completion of this programme you will be able to:

- B1. Manipulate and analyse large datasets using traditional as well as contemporary database management systems;
- B2. Apply descriptive, predictive, and prescriptive analytics techniques on structured, semi-structured and unstructured data to extract patterns, forecast trends, run what-if scenarios, and determine the optimal course of action;
- B3. Demonstrate a basic working knowledge of technologies specifically designed for big data;
- B4. Visualize and communicate the results of your analysis in an efficient and effective way.
- B5. Demonstrate how new concepts are applicable in an international business environment.
- B6. Demonstrate practices that are ethical, responsible and sustainable.

### Teaching and Learning Methods

You are expected to attain a 'performative' level of understanding, i.e. be able to show effective judgement/ creativity in selection/development of an appropriate model for a real situation and demonstrate a high level of skills in data handling and analysis. As such learning/teaching methods used will mainly include case-based and problem-based learning, where learning starts from a problem or a series of problems presented by the lecturer, and in going about solving the problems you will learn the knowledge, facts and procedures that are needed. The cases and problems will be accompanied by relevant datasets, and there will be plenty of opportunities for students to get feedback from their lecturers as well as peers.

### Assessment Methods

Your ability to apply the intellectual and research skills that you have learnt is assessed by coursework or examination. B1-B4 will be assessed by a mix of examinations, presentations, essays, coursework assignments, and reports. You will receive feedback on your progress throughout the programme based upon your contribution to in-class activities and formative exercises. The final project is designed to test your ability to conduct an independent study on creating value using various business analytics techniques from a dataset provided by your supervisor. This important assessment addresses B1-B4 collectively.

## Transferable and Generic Skills

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On successful completion of 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 and spoken formats;
- C3. Work effectively as an individual or in groups and recognise problems associated with group working;
- C4. Use library and other resources effectively, and apply bibliographical skills.

### Teaching and Learning Methods

Most modules develop some combination of the above skills through lectures, individual and group coursework assignments, workshops, case studies or reading. C1 will be addressed primarily through coursework assignments and the final year project, in addition to in-class tasks where students will work with case study material which consists of different sources of data, as part of formative exercises. C2 and C3 will be achieved through individual and group exercises. This may include report writing, essays, presentations, or simulations. C4 will be met through the production of written group or individual work for summative assessment.

### Assessment Methods

The final project is the most appropriate method for testing transferrable and generic skills. The projects will be data driven and involves student working on a particular dataset to find business problems they

think are of interest and formulate their own solutions. Apart from addressing the above ILOs, this would also allow students to show some level of creativity in both formulating and solving the problem.

## Programme Structure

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The programme structure table is below:

Information about pre and co-requisites is included in individual module profiles.

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.

### Pathway

#### Part I

##### Typical course content

This course structure is consistent with other undergraduate programmes in the pathway portfolio. You will study eight modules in each year of the degree, divided equally between the semesters. In the first year of your study (Part 1), you will study a common year to gain a basic overview of analytical techniques, skills, theory and knowledge relevant to a business degree. In the second year (Part 2), the programme will provide intermediate-level training in SAS, the widely used analytic software packages in the industry, which will be used for performing computations and analysis in the majority of the courses that follow. You will also learn forecasting methods and simulation techniques. You will be able to choose two optional modules in each semester of Part 2 to broaden your horizons. Basics of data mining and knowledge management as well as some advanced topics in analytics and optimization will be taught in the third year (Part 3), along with a double-weighted project. The project will run in a more structured way compared to other dissertations as it will be data-driven and involves applying the knowledge and skills developed on the program. You can also take one optional module in each semester of Part 3.

There is also the opportunity for you to choose modules from the University's Curriculum Innovation initiative, where you can undertake some interdisciplinary modules from other Faculties and Schools. You also have the opportunity to choose selected options from other Schools, which are relevant to the degree programme, subject to availability.

Some of these modules are subject to pre-requisites which are available in individual module profiles.

The module requirements for each programme are shown for each Part below; modules are either core (must be taken and passed), compulsory (must be taken), or optional (may be taken).

#### Programme details

##### Part 1

In your first year (Part 1), you will take 60 ECTS/120 CATS at FHEQ Level 4, 30 ECTS/60 CATS in each semester. Note that six of the Part 1 modules are core and must be passed in order to progress whilst MANG1001 Financial Accounting 1 and MANG1017 Key Skills for Business are compulsory and hence can be compensated.

##### Part 2

In your second year (Part 2), you will take 60 ECTS/120 CATS at FHEQ Level 5, 30 ECTS/60 CATS in each semester. Two modules in Part 2 are compulsory 15 ECTS/30 CATS and two are core 15 ECTS/30 CATS. The remaining 30 ECTS/60 CATS can be taken from a list of optional modules offered in the Business School or Electronics and Computer Science. You should choose 15 ECTS/30 CATS of options per Semester. Each Semester 7.5 ECTS/15 CATS of option modules may include modules provided by the Curriculum Innovation Project Curriculum Innovation Project or a Language module.

### Part 3

A compulsory Final Project module runs across Semester 1 and 2 15 ECTS/30 CATS. You will also take another 30 ECTS/60 CATS of compulsory modules in Part 3. In addition, you will be able to select 15 ECTS/30 CATS of optional modules in the final year.

#### Part I Compulsory (must take) Semester 1

Code	Module Title	ECTS	Type
MANG1025	Financial Accounting 1 for Business Students	7.5	Compulsory

#### Part I Compulsory (must take) Semester 2

Code	Module Title	ECTS	Type
MANG1017	Key Skills for Business	7.5	Compulsory

#### Part I Core (must take and pass) Semester 1

You must take EITHER

MANG1019 Foundations of Business Analytics (A level Maths or confident in Maths)

OR

MANG1007 Management Analysis (if no A level Maths)

Code	Module Title	ECTS	Type
MANG1020	Ideas that Shaped the Business World 1: Government and Society	7.5	Core
MANG1003	Introduction to Management	7.5	Core
MANG1019	Foundations of Business Analytics	7.5	Optional/Core
MANG1007	Management Analysis	7.5	Optional/Core

#### Part I Core (must take and pass) Semester 2

Code	Module Title	ECTS	Type
MANG1021	Ideas that Shaped the Business World 2: Markets and Consumers	7.5	Core
MANG1002	Management Accounting 1	7.5	Core
MANG1022	Technologies that shaped the Business World: Digital Age	7.5	Core

### Part II

#### Part II Compulsory (must take) Semester 1

Code	Module Title	ECTS	Type
MANG2006	Principles and Practice of Management Science	7.5	Compulsory

#### Part II Compulsory (must take) Semester 2

Code	Module Title	ECTS	Type
MANG2002	Business Simulation	7.5	Compulsory

#### Part II Core (must take and pass) Semester 1

Code	Module Title	ECTS	Type
MANG2062	SAS Base Programming	7.5	Core

#### Part II Core (must take and pass) Semester 2

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG2065	Business Forecasting	7.5	Core

Part II Optional - Semester 1 modules

You must choose 15 ECTS/30 CATS from the following list of modules. As part of this you can also choose to take 7.5 ECTS/15 CATS in a Language (LANGXXXX) or a Curriculum Innovation module (UOSM2XXX).

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG2071	Business Analytics Programming	7.5	Optional
MANG2058	Digital Business Models	7.5	Optional
MANG2073	Digital Marketing for Business	7.5	Optional
MANG2015	Financial Management	7.5	Optional

Part II Optional - Semester 2 modules

You must choose 15 ECTS/30 CATS from the following list of modules. As part of this you can also choose to take 7.5 ECTS/15 CATS in a Language (LANGXXXX) or a Curriculum Innovation module (UOSM2XXX).

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG2077	Crisis Management	7.5	Optional
ENTR2004	Innovation, Technology and the Environment	7.5	Optional
MANG2069	Making Successful Decisions	7.5	Optional
MANG2021	Operations Management	7.5	Optional
MANG2066	Principles of Audit and Taxation	7.5	Optional
MANG2007	Problem Structuring Methods	7.5	Optional

Part III

Part III Compulsory (must take) Full Year

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG3074	Final Project	15	Compulsory

Part III Compulsory (must take) Semester 1

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG3056	Data Mining for Marketing	7.5	Compulsory
MANG3010	Knowledge Management	7.5	Compulsory

Part III Compulsory (must take) Semester 2

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG3073	Analytics in Action	7.5	Compulsory
MANG3013	Optimisation	7.5	Compulsory

Part III Optional - Semester 1 modules

You must choose 7.5 ECTS/15 CATS from the following list of modules.

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
MANG2071	Business Analytics Programming	7.5	Optional
MANG3053	Customer Insight	7.5	Optional
MANG3046	Managing Innovation	7.5	Optional
MANG3054	Marketing in the Digital Age	7.5	Optional
MANG3072	Technological Innovation	7.5	Optional

Part III Optional - Semester 2 modules

You must choose 7.5 ECTS/15 CATS from the following list of modules.

Code	Module Title	ECTS	Type
MANG3075	Future Horizons for Enterprise	7.5	Optional
MANG3066	Managing High-Growth Businesses	7.5	Optional
MANG3034	Project Management	7.5	Optional
MANG3032	Risk Management	7.5	Optional
MANG3078	Strategic Operations Management	7.5	Optional

## Progression Requirements

The programme follows the University's regulations for [\*Progression, Determination and Classification of Results : Undergraduate and Integrated Masters Programmes\*](#) or [\*Progression, Determination and Classification of Results: Postgraduate Master's Programmes\*](#). Any exemptions or variations to the University regulations, approved by AQSC are located in [\*section VI of the University Calendar\*](#).

## 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. Support includes daily Drop In at Highfield campus at 13.00 – 15.00 (Monday, Wednesday and Friday out of term-time) or via on-line chat on weekdays from 14.00 – 16.00. Arrangements can also be made for meetings via Skype.
- assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia)
- the Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards
- Career and Employability services, 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 and in the local community (18.00-08.00).
- A Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.

The Students' Union provides

- an academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education; SUSU provides training and support for all these representatives, whose role is to represent students' views to the University.
- opportunities for extracurricular activities and volunteering
- an 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:

- A dedicated study skills development induction programme for new entrants in their first week, including a library tour.
- An Academic Personal Tutor
- Programme handbooks
- Module support material (increasingly in electronic form).



## Methods for evaluating the quality of teaching and learning

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

- Completing student evaluation questionnaires for each module of the programme.
- Acting as a student representative on various committees, e.g. Staff/Student Liaison Committees, School 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.

Further details on the University's quality assurance processes are given in the [\*Quality handbook\*](#).

## Career Opportunities

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The career opportunities are wide and varied in this discipline, covering almost any organization that is investing in data and data usage. In addition, many consultancy companies as well as government agencies need competent business analysts. Considering the shortage of skilled workers in the area of business analysts both in the UK and internationally, it is expected that students will be attracted by the industry soon after the graduation.

## External Examiner(s) for the programme

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Name: Mr Sunil Banga – University of Lancaster

Name: Dr Nicholas Vasilakos - University of East Anglia

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 Academic 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 they take full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook.

## Appendix 1:

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 also have to pay for:

### Additional Costs

Type	Details
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.
Optional Visits (e.g. museums, galleries)	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.
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. <a href="https://www.southampton.ac.uk/isolutions/students/printing">https://www.southampton.ac.uk/isolutions/students/printing</a>
Software Licenses	Some modules will require you to learn and use a particular computer Software. The software packages will be available in selected university computer labs. The student version of some of these packages may also be available to download free of charge from the iSolutions website.
Stationery	You will be expected to provide your own day-to-day stationery items, e.g. pens, pencils, notebooks, etc). Any specialist stationery items will be specified under the Additional Costs tab of the relevant module
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.

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](http://www.calendar.soton.ac.uk).