BSc Business Statistics

UCAS Code: G390

For students entering Part 1 in 2005

Awarding Institution: The University of Reading
Teaching Institution: The University of Reading
Relevant QAA subject benchmarking group: Mathematics, Statistics and Operational Research
Faculty of Life Sciences
Programme length: 3 years
Programme Director: Dr K L Ayres
Date of specification: 29 March 2007
Programme Adviser: Dr K L Ayres
Board of Studies: Mathematics & Statistics
Accreditation:

Summary of programme aims and learning outcomes

This programme enables students interested in business, marketing, finance and industry to acquire a sound education in those statistical concepts that will be useful in the business world. This is achieved by providing modules which describe statistical techniques relevant to business problems, modules in economics and econometrics relevant to the management of resources, and modules that provide a training in IT skills that are essential in business. (For a full statement of the programme aims and outcomes, see below.)

Transferable skills

The University's Strategy for Teaching and Learning has identified a number of generic transferable skills which all students are expected to have developed by the end of their degree programme. In following this programme, students will have had the opportunity to enhance their skills relating to career management, communication (both written and oral), information handling, numeracy, problem-solving, team working and use of information technology.

As part of this programme students are expected to have gained experience and show competence in the following transferable skills: IT (word-processing, spreadsheet, database and statistical software), scientific writing, oral presentation, team-working, problem-solving, use of library and internet resources, time-management, and career planning.

Programme content

The profile which follows states which modules must be taken (the compulsory part), together with one or more lists of modules from which the student must make a selection (the "selected" modules). Students must choose such additional modules as they wish, in consultation with their programme advisor, to make 120 credits in each Part. The number of credits for each module is shown after its title.

Part 1 (three terms)

		Credits	*Level*
Compulsory modules			
AS1A	*Communicating with Statistics*	20	C
AS1B	*Probability and Statistical Methods*	20	C
AP1SB1	*Introduction to Management*	10	C
AP1EM1	*Introduction to Marketing*	10	C

Selected modules chosen from the following three options:

Option 1

EC104	*Economics for Managers*	20	C

and one of

AS1C	*Mathematical Methods for Statistics*	20	C
MA111	*Mathematics for Scientists*	20	C

and one of

SE1TR5	*E-Business 1*	20	C
SE1TQ5	*Commercial Off-the-Shelf Software*	20	C
LA1***	*Modern Language*	20	C
MA115	*Codes and Code Breaking*	20	C
OR	*Any other module(s) of 20 credits*		

Option 2

	EC104	*Economics for Managers*	20	C
	MA11B	*Calculus and Applications*	20	C
and	MA11C	*Matrices, Vectors and Applications*	20	C

Option 3

EC1F1A	*Introductory Microeconomics*	20	C
EC1F1B	*Introductory Macroeconomics*	20	C

and one of

AS1C	*Mathematical Methods for Statistics*	20	C
MA111	*Mathematics for Scientists*	20	C

Notes: Modules EC104, AS1C and SE1TR5 are the recommended choices. Not all combinations of modules may be available due to timetabling constraints.

Part 2 (three terms)

Compulsory modules

AS2A	*Statistical Theory and Methods*	20	I
AS2B	*Linear Models*	20	I
AS2G	*Skills for Statisticians*	20	I
EC203A	*Introductory Econometrics I.1*	20	I
EC203B	*Introductory Econometrics I.2*	10	I
AP2SB1	*Business Management*	10	I

Selected modules

Modules to the value of 20 credits chosen from:

AP2SB2	*Financial Management*	10	I
AP2EM1	*Marketing Management*	10	I
AS2D	*Medical Statistics*	20	I
AS2F	*Study Design and Sampling Methods*	20	I
LA1***	*Modern Language*	20	C

Part 3 (three terms)

Compulsory modules

AS3A	*Advanced Statistical Modelling*	20	H
EC313A	*Business Forecasting and OR I*	20	H
EC318A	*Econometric Methods I*	20	H

Selected modules to the value of at least 40 credits chosen from the following:

AS3C	*Analysis of Structured Data*	20	H
AS3D	*Operational Research Techniques*	20	H
AS3F	*Statistics Research Project*	40	H

AND additional modules chosen from the following to give a total of 120 credits, of which at least 100 credits must be at Level H:

MM270	*The Practice of Entrepreneurship*	20	I *
AP3EM1	*Marketing Strategy*	10	H
AP3EM2	*Marketing Research Methods*	10	H

OR any other module(s) totalling 20 credits

* 20 credit module at Level I may be taken in Part 3 only if not taken in Part 2, but note that only one Level I module may be taken in Part 3.

Progression requirements

To gain a threshold performance at Part 1 and qualify for the CertHE a student shall normally be required to achieve an overall average of 40% over 120 credits taken in Part 1, and a mark of at least 30% in individual modules amounting to not less than 100 credits. In order to progress from Part 1 to Part 2, a student shall normally be required to achieve a threshold performance at Part 1 and to obtain an average of at least 40% in the two compulsory Statistics modules taken together.

To gain a threshold performance at Part 2 and qualify for the DipHE a student shall normally be required to achieve an overall average of 40% over 120 credits taken in Part 2, and a mark of at least 30% in individual modules amounting to not less than 100 credits. In order to progress from Part 2 to Part 3, a student shall normally be required to achieve a threshold performance at Part 2.

Summary of teaching and assessment

Teaching is organised in modules that typically involve both lectures and practicals. The assessment is carried out within the University's degree classification scheme, details of which are in the programme handbook. The pass mark in each module is 40%. Modules are normally assessed by a mixture of coursework and formal examination, although some are assessed wholly by coursework. The Part 3 project is essentially self-study supported by a series of tutorials, and is assessed as coursework. Part 2 contributes one third of the overall assessment and Part 3 the remaining two thirds.

Admission requirements

Entrants to this programme are normally required to have obtained:

UCAS Tariff: A Level: 280 points including at least AS Mathematics; *or*

International Baccalaureate: 29 points including 5 in Mathematics; *or*

Irish Highers: BBBBB, including Mathematics.

Admission Tutor: Dr Karen Ayres (Applied Statistics)

Support for students and their learning

University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers, and the University Library which, across its three sites, holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses the Student Access to Independent Learning (S@IL) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Personal Tutors, the Careers Advisory Service, the University's Special Needs Advisor, Study Advisors, Hall Wardens and the Students' Union.

Within the providing departments additional support is given though practical classes, and the development of problem-solving skills is assisted by provision of model solutions to exercises. Advice on statistical computing is available from the statistical computing staff, and copies of software manuals are held in a computing library. There is a Programme Adviser to offer advice on the choice of modules within the programme.

Career prospects:

Students who follow this programme will have the skills necessary for careers as statisticians in financial institutions, insurance companies and industry.

Opportunities for study abroad:

There are no formal arrangements, but the possibility of a placement year abroad is available in the BSc programme in Applied Statistics.

Educational aims of the programme

The programme aims to provide a thorough degree-level education in statistics. The programme covers the basic ideas of summarising and presenting data, economics and business management, and statistical methods. Strong emphasis is given to practical applications of the subject, and the use of statistical software in data analysis.

Programme outcomes

The programme provides opportunities to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

Knowledge and Understanding

A. Knowledge and understanding of:	**Teaching/learning methods and strategies**
1. the fundamental concepts and techniques of economics, business management, marketing, data summary and presentation, statistical inference and linear modelling 2. the application of statistics in business 3. a selection of more specialist optional topics 4. the use of statistical software in data analysis.	The knowledge required for the basic topics is delineated in formal lectures supported by problem sets for students to tackle on their own. In Part 1 these are supported by tutorials and practical classes through which students can obtain additional help and feedback on their work. In the programme students are expected to work on practical problems on their own and seek help when required. Model solutions are provided for problems set. *Assessment* Most knowledge is tested through a combination of coursework and unseen formal examinations. Dissertations and oral presentations also contribute in other parts of the programme.

Skills and other attributes

B. Intellectual skills – able to:

1. think logically
2. analyse and solve problems
3. organise tasks into a structured form
4. transfer appropriate knowledge and methods from one topic within the subject to another
5. recognise and use appropriate statistical methods in data analysis
6. plan, conduct and write a report on an independent project.

Teaching/learning methods and strategies

Logic is an essential part of the understanding of economic and statistical techniques, and the use of statistical software for data analysis is embedded throughout the programme. The quality of solutions to a problem is substantially determined by the structure of that response; analysis, synthesis, problem solving, integration of theory and application, and knowledge transfer from one topic to another are intrinsic to high-level performance in the programme.

Assessment

Skills 1-3 are assessed indirectly in most parts of the programme, while 4 contributes to the more successful work. Skill 5 is assessed in practical work in Parts 2 and 3, while 6 is assessed through the final year project.

C. Practical skills – able to:

1. plan, conduct and report on the results of statistical investigations
2. develop an understanding of business management
3. use statistical software in an effective manner
4. write and defend a report on a chosen topic.

Teaching/learning methods and strategies

Lectures, seminars, practical work and assignments are designed to enhance skills 1-4.

Assessment

Skills 1 and 2 are tested both formatively in coursework and summatively in examinations. Skill 3 is assessed in coursework that involves computer based analysis, and skill 4 is assessed through the project dissertation and its oral presentation.

D. Transferable skills – able to:

1. use IT (word-processing, spreadsheets and statistical software)
2. communicate scientific ideas
3. give oral presentations
4. work effectively as part of a team
5. use library and internet resources
6. manage time
7. plan their career.

Teaching/learning methods and strategies

The use of IT is embedded throughout the programme, and in the packages Minitab and SAS taught in Parts 1 and 2. Team work and career planning feature in modules on *Business Management and Marketing*, and *Skills for Statisticians*. Communication skills are enhanced in Part 1, and are further deployed in modules in Parts 2 and 3. Time management is essential for the timely and effective completion of the programme. Library and internet resources are required for certain assignments and the final year project, and contribute to the best performances throughout.

Assessment

Skills 1 and 2 are assessed through coursework. Skills 2-4 contribute assessed coursework towards the module *Skills for Statisticians*. Effective use of these skills will enhance performance in later modules.

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 he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.**