PEDip in Statistics
For students entering Part 1 in 2011/2

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	Mathematics, Statistics and Operational Research
Faculty:	Science Faculty
Programme length:	1 years
Date of specification:	23/Aug/2011
Programme Director:	Dr Hilary Kimber
Programme Advisor:	
Board of Studies:	Statistics Postgraduate Board of Studies
Accreditation:	

Summary of programme aims
The programme aims to provide a broad range of practical skills in statistics. This is achieved by providing modules which cover the basic principles of drawing conclusions from data, as well as those concentrating on the practical applications of the subject. The modules are complemented by a tutorial specifically for the Diploma. A distinguishing feature of the programme is that it gives strong emphasis on the practical applications of statistics in a variety of areas.

The programme aims to provide a thorough education in statistics for those students with little formal training in statistics who wish to develop their statistical skills, either to help in their work, to change career, or to prepare for a Masters programme in statistics. The programme covers the basic ideas of summarising and presenting data, statistical inference and linear modelling. Strong emphasis is given to practical applications of the subject, and the use of statistical software in data analysis.

For those students planning to continue to the MSc in Biometry, the modules taken are specified to ensure the necessary theoretical background for the MSc. The Diploma year then becomes the first of a two-year programme with the aim of students becoming competent in thinking and working with mathematical language, and learning the key statistical concepts.

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 programme. In following this programme, students will have had the opportunity to enhance their skills relating to communication, 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 and statistical software), scientific writing, problem-solving, use of library and internet resources, and time-management.

Programme content
The profile which follows states which modules must be taken (the compulsory part), together with a list 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 total. The number of credits for each module is shown after its title.

Compulsory modules

Code	*Title*	*Credits*	*Level*
AS1E	Exploring Your Data	10	4
AS1F	Statistical Inference	10	4
AS1G	Probability	10	4
AS1H	Statistical Methods	10	4
AS1C	Mathematical Methods for Statistics	20	4
AS2B	Linear Models	20	5

Optional modules
Choose two of:

Code	*Title*	*Credits*	*Level*
AS2H	Forensic Statistics and Genetics	20	5
AS2D	Medical Statistics	20	5
AS2A*	Statistical Theory and Methods	20	5

** Students intending to proceed to the MSc in Biometry must take module AS2A.*

Part-time or modular arrangements

The programme may be undertaken over two years on a part-time basis. Selection of modules between the two years will be agreed between the student and the Programme Director at the start of the programme, but would usually involve taking AS1E, AS1F, AS1G, AS1H and AS1C in the first year.

Progression requirements

N/A

Assessment and classification

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%.

Students are assessed on all modules by a mixture of examinations and continuously assessed assignments. The division of marks between examinations and assignments varies from module to module (see module descriptions). A final mark is obtained for each module. To pass, students must obtain an overall average of at least 40% over the 120 credits taken, and a mark of at least 30% in individual modules amounting to not less than 100 credits.

Students who achieve an overall average of 80% or more will be eligible for a Distinction.
In general, students wishing to proceed to the MSc should obtain at least 65% overall. In particular, students need to show that their mathematical ability is of a high enough standard.

Admission requirements

Entrants to this programme are normally required to have obtained a first degree or have other qualifications enhanced by practical experience of working as a statistician.

Admissions Tutor: Dr H Kimber

Support for students and their learning

University support for students and their learning falls into two categories. Learning support is provided by a wide array of services across the University, including: the University Library, the Student Employment, Experience and Careers Centre (SEECC), In-sessional English Support Programme, the Study Advice and Mathematics Support Centre teams, IT Services and 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, School Senior Tutors, the Students' Union, the Medical Practice and advisers in the Student Services Centre. The Student Services Centre is housed in the Carrington Building and offers advice on accommodation, careers, disability, finance, and wellbeing. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions and runs workshops and seminars on a range of topics. For more information see www.reading.ac.uk/student

Within the providing department additional support is given though practical classes, and the development of problem-solving skills is assisted by provision of model solutions to exercises where appropriate. Advice on statistical computing is available from lecturing staff. There is a Programme Director to offer advice on the choice of modules within the programme.

Career prospects

In recent years, most students who have followed this programme have chosen to gain entry to an MSc programme in Statistics. The programme has also enabled students to enhance their career opportunities.

Opportunities for study abroad or for placements

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 data summary and presentation, statistical inference and linear modelling 2. the application of statistics in a variety of areas 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. 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 where appropriate. *Assessment* Most knowledge is tested through a combination of coursework and unseen formal examinations.

Skills and other attributes

B. Intellectual skills - *able to:*	**Teaching/learning methods and strategies**
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	Logic is an essential part of the understanding of 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..
C. Practical skills - *able to:*	**Teaching/learning methods and strategies**
1. plan, conduct and report on the results of statistical investigations 2. formulate and solve statistical problems 3. use statistical software in an effective manner	Lectures, practical work and assignments are designed to enhance skills 1-3. *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.

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. Communication skills are enhanced and deployed in modules. Time management is essential for the timely and effective completion of the programme. Library and internet resources are required for certain assignments, and contribute to the best performances throughout. Career planning is addressed in the weekly tutorial sessions.

Assessment
Skills 1 and 2 are assessed through coursework. The effective use of all 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 process or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.