Diploma in Statistics

Awarding Institution:ThTeaching Institution:ThFaculty of Life SciencesPrFor students entering in 2003DaProgramme Director:Dr N A ButlerProgramme Admissions Tutor:Dr D CollettBoard of Studies:Postgraduate Board of Studies

The University of Reading The University of Reading Programme length: 9 months Date of specification:

Summary of programme aims

The Diploma in Statistics aims to provide two types of graduates: students from a nonmathematical background who wish to develop degree-level statistical skills, and students from a mathematical background which is not sufficiently advanced to allow them direct entry to a Masters level course. The course may be viewed either as an end in itself or as preparation for the MSc in Biometry.

Transferable skills

On completion of the programme, students will have developed the following transferable skills:

- computing skills for data management, data analysis and communication
- report-writing
- problem-solving
- ability to work as part of a team.

Programme content

The profile which follows states which modules must be taken (the compulsory modules), together with a list of optional modules. Students must choose such additional modules, in consultation with their programme advisor, to make 120 credits in total. The number of credits for each total is shown after its title.

			Credits	Level
Compulsory	modul	les		
AS1	А	Communicating with Statistics	20	С
ASI		Mathematical Methods for Statistics	20	C C
AS2		Statistical Theory and Methods	20	I
AS2		Linear Models	20	I
AS2	E	Survey Data Management	20	Ι
Optional mo	odules			
One of:				
AS2	D.	Medical Statistics	20	Ι
AS2	F	Sampling Methods and Study Design	20	Ι

Progression requirements

There are no progression requirements during the Diploma programme, but students are required to obtain at least 60% overall in order to progress to the MSc.

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 50%. Modules are assessed by a mixture of coursework and formal examination.

Admission requirements

At the discretion of the Diploma Admissions Tutor.

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.

Support for students in the School of Applied Statistics is similarly aimed at both learning and pastoral support. Students receive weekly tutorials to sort out difficulties in their courses. Advice on statistical computing is available from the computing staff of the School of Applied Statistics. Pastoral support augments the University's care systems, with the Programme Director acting as Personal Tutor to each student.

A comprehensive handbook is available for the programme; this is available on-line, as are a wealth of other resources via the School's internet. There is an active Student-Staff Committee with Diploma representation.

Career Prospects

Many Diploma students go on to do the MSc in Biometry after which their careers prospects are very good. In recent years, students who have followed the MSc programme have entered careers as statisticians in the pharmaceutical industry, university medical schools, medical research centres and agricultural research institutes, in the UK and overseas.

Opportunities for study abroad or placements

None at present.

Educational aims of the programme

The programme aims to provide graduates with a thorough knowledge of degree-level statistics, with particular emphasis on biometrical applications. The programme also aims to prepare students for the MSc in Biometry.

Programme outcomes

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

A Knowledge and understanding of			Teaching/learning methods and strategies
	 A. Knowledge and understanding of: the fundamental concepts and techniques of data summary and presentation, statistical inference and linear modelling – the application of statistics in a variety of areas the use of statistical software in data analysis. 		Teaching/learning methods and strategies 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. <i>Assessment</i> Most knowledge is tested through a combination of coursework and unseen formal examinations. Project work and oral
			presentations also contribute in other parts of the programme.

Knowledge and Understanding

Skills and other attributes

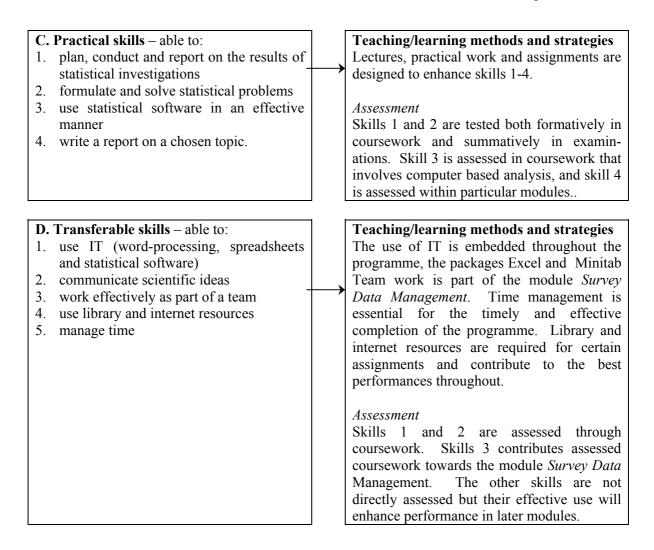
B. Intellectual skills – able to:

- 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 a group project.

Teaching/learning methods and strategies 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, while 6 is assessed within particular 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 expect 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 module and programme handbooks.