

Professional Doctorate in Statistics For students entering in 2010

Awarding Institution:	The University of Reading
Teaching Institution:	The University of Reading Faculty of Science
Programme length:	36 months (FT equivalent)
Date of specification:	July 2010
Programme Director:	Dr FM Underwood
Board of Studies:	Statistics Postgraduate Board of Studies
Accreditation:	N/A

Summary of programme aims

This programme aims to provide professional statisticians in institutions, usually outside the University sector, with a pathway to developing their professional and research skills beyond Masters level in a way that is relevant to their continuing career as statisticians. The programme aims to increase student's knowledge and understanding of statistics and other relevant issues. In particular students will learn to evaluate research findings and to conduct original research appropriate to their professional work.

This is a flexible programme to cater for the varying needs of the students. For example, it is clear that a statistician in the bio-statistics department of a large UK-based pharmaceutical company will have different statistical interests from a lone statistician in an agricultural research institute. The professional skills that are needed will also be different. The programme is therefore modular, and the exact nature and content of the modules is tailored to meet the requirements of the individual student in discussion with their supervisor and the programme director.

Transferable skills

Students on this programme will be able to

- Communicate orally and in writing
- Search for information in the literature and on the internet
- Use information to make decisions
- Monitor own learning
- Design and execute research projects

Programme content

Stage 1:

Research Methods (30 credits)

Project Management (30 credits)

Project Plan (30 credits)

Literature Review (90 credits)

Plus two 30-credit modules on statistics and one 30-credit CPD module

The literature review will normally be linked to the intended focus of the thesis except where special circumstances, such as employer requirements or a substantial lapse of time between the two, make this undesirable.

Stage 2:

Research project (180 credits)

Plus two 30-credit modules on statistics and one 30-credit CPD module

Progression requirements

The completion of all modules in Stage 1 will be required before formal permission to start Stage 2 is given. In order to be awarded the DStat, the candidate must pass all modules. If a student fails a module, then he/she will be required to resubmit the relevant module for reassessment.

However, even if not eligible for the DStat, the student may, at the discretion of the examiners, be awarded MPhil if the research work is of appropriate quality.

Summary of teaching and assessment

All modules will be assessed. Successful completion of all modules is required for the award of DStat. The modules chosen may be from those offered in the University or from other providers agreed by the student's Higher Degree Committee. Students are responsible for payment of the course fee for any internal and external CPD courses. The modules selected must allow the student to demonstrate the application of knowledge to professional statistical issues.

The criteria for selecting and assessing coursework assignments are that students should:

- Demonstrate evidence of using reading and course materials to structure the shape and content of the assignment
- Involve critical analysis and judgment
- Demonstrate synthesis of advanced knowledge
- Discover and recognise limitations of current knowledge.

For the CPD modules a key criterion is that students demonstrate the application of knowledge to professional statistical issues

The criteria for assessing the Literature Review and Thesis are that students should demonstrate:

- Originality in tackling an appropriately difficult research project
- Systematic literature review
- Appropriate design considerations
- Appropriate description, discussion and explanation of methodology
- Appropriate presentation, analysis and discussion of results
- Appropriate conclusions

The criteria for the viva voce are that the student demonstrate:

- that the work is the student's own
- the ability to defend the thesis
- Optionally any additional explanation and development of thinking on the work

Admission requirements

A second class honours degree (or equivalent) in a relevant subject and normally three years of relevant professional experience.

Admissions Tutor: Dr FM Underwood

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, School Senior Tutors, the Students' Union, the Medical Practice and the Student Services Directorate. The Student Services Directorate is housed in the Carrington Building and includes the Careers Advisory Service, the Disability Advisory Service, Accommodation Advisory Team, Student Financial Support, Counselling and Study Advisors. Student Services has a Helpdesk available for enquiries made in person or online (www.risisweb.reading.ac.uk), or by calling the central enquiry number on (0118) 378 5555. 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 on everything from accommodation to finance. The Carrington Building is open between 8:30 and 17:30 Monday to Thursday (17:00 Friday and during vacation periods). Further information can be found in the Student website (www.reading.ac.uk/student).

Students will be provided with study packs and, where appropriate, email and related support in addition to face-to-face supervision. Each student will have a Higher Degree Committee to give advice and support.

Career prospects

The students will be experienced statisticians, many of whom expect to make further progress within the statistics profession.

Opportunities for study abroad or for placements

Students will be encouraged to attend national and international conferences.

Educational aims of the programme

The aims of the programme are to increase the knowledge and understanding of students on the programme about statistics and other relevant issues in their roles as professional statisticians. In particular this high level programme aims to examine developments at the cutting edge of current knowledge. It also aims to equip students on the programme to evaluate research findings and to conduct original research appropriate to their professional work.

Programme Outcomes

Knowledge and Understanding

<p>A. Knowledge and understanding of:</p> <p>Research methods and study design</p> <p>Project planning and management</p> <p>Advanced statistics and related methods in applied statistics research and professional practice</p> <p>Relevant professional issues</p>	<p>Teaching/learning methods and strategies</p> <p>Reflection on course materials and related research and readings</p> <p>Face-to-face teaching and supervision</p> <p>Face-to-face discussion</p> <p>Professional experiences</p> <p><i>Assessment</i></p> <p>Assessment of assignments and research project, based on the criteria stated in Programme Content.</p>
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Skills and other attributes

<p>B. Intellectual skills – able to:</p> <p>Analyse concepts, arguments, data and situations</p> <p>Synthesise descriptions and underlying features of situations from a variety of sources</p> <p>Create plans of various kinds, including research investigations</p> <p>Evaluate statistical results and research findings</p> <p>Relate systematic evidence to issues arising in professional practice</p>	<p>Teaching/learning methods and strategies</p> <p>Activities based on course materials and related research and readings</p> <p><i>Assessment</i></p> <p>Assessment of assignments and research project, based on the criteria stated in Programme Content.</p>
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<p>C. Practical skills – able to:</p> <p>Use statistical and related methods in professional context</p> <p>Formulate and manage projects</p> <p>Access wide range of literature and data using bibliographic and IT skills</p> <p>Use IT for data handling and analysis</p> <p>Communicate to different audiences</p>	<p>Teaching/learning methods and strategies</p> <p>Activities based on course materials and related research and readings</p> <p>Assignment preparation</p> <p>Presentations</p> <p><i>Assessment</i></p> <p>Assignments will report the results of such activities</p>
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D. Transferable skills – able to:

Monitor own learning

Communicate orally and in writing

Search for information in the literature and on the internet

Use information to make decisions

Project planning and management

Data analysis

Report writing

Teaching/learning methods and strategies

Course materials

Discussion with supervisor and peers

Face-to-face presentations

Assignment tasks

Assessment

Assignments

Literature review

Thesis

Viva voce

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 module descriptions and programme handbooks. 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.