REPORT ON EXAMINATIONS

M.Sc. in Mathematical Modelling and Scientific Computing 2014/15

Part I

    A. Statistics

    (1) Numbers and percentages in each class/category

Class	Number				%			
	2014/15	2013/14	2012/13	2011/12	2014/15	2013/14	2012/13	2011/12
Distinction	4	8	6	10	14.3	25	28.6	43.5
Pass	22	22	11	12	78.6	69	52.4	52.2
Fail	1	2	3	0	3.6	6.3	14.3	0
Incomplete	1	0	1	1	3.6	0	4.7	4.3

    (2) Vivas

All candidates were examined viva voce. This year the performances varied significantly, as for the previous academic year, whereby the performances ranged from poor to excellent.

    (3) Marking of scripts

Examinations were given in Weeks 0 of Hilary and Trinity Terms 2015. Scripts were single-marked by assessors followed by a script check carried out by the Course Director. Finalisation of marks by the examiners took place during an examiners' meeting in week 2 of each term. Special Topics and Case Studies were double-blind marked by assessors. In cases where marks varied over the pass/fail borderline, or the difference in marks was greater than ten, the assessors were asked to meet and reconcile their marks. All marks were approved by the examiners during the meetings held in week 7 of Hilary and Trinity terms, as well as at the final examiners' meeting, before releasing them to the candidates. All dissertations were read and marked by at least two examiners; marks were approved by all examiners at the final examiners' meeting.

    B. New examining methods and procedures

New examining methods and procedures were not introduced in the academic year 2014-15.

    C. Changes in examining methods etc which the examiners would wish the faculty/department and the divisional board to consider
None.

    D. How candidates are made aware of conventions

The conventions are posted on the course website and are hard copies are circulated to the students. The Course Director discusses these with the candidates and the candidates are reminded of the conventions by email on several occasions during the year.

Part II

A. General comments on the examination

None.

B. Equal opportunities issues and gender breakdown

There were 28 students in total; 21 male and 7 female candidates; 15 male candidates and 6 female candidates passed; 4 male candidates and 0 female candidates were awarded distinctions; 1 male candidate and 1 female candidate failed the course; 1 male candidate's marks have yet to be released.

C. Candidates' performance in each part of the examination

This course administers examinations internally in January and April, with each student sitting 4 papers. Each of the two sets of examinations is split into Paper A (Mathematical Methods) and Paper B (Numerical Analysis). Both sets of examinations went smoothly this year, with a good distribution of marks between failure and distinction ranges. Performance on the Case Studies, Special Topics and dissertations also ranged from fail to distinction level.

D. Distribution of special topics

Of the 25 topics offered this year, 4 failed to attract any students.

Michaelmas Term	Passed	Failed
Approximation of Functions	3	0
Dynamical Systems & Energy Minimisation	1	0
Mathematical Ecology & Biology	13	0
Mathematical Geoscience	1	0
Solid Mechanics	1	0
Statistical Mechanics	3	1
Stochastic Differential Equations	1	0
Topics in Fluid Mechanics	1	0
Viscous Flow	2	0

Hilary Term	Passed	Failed	Pending
Classical Mechanics	1	0	
Finite Element Methods for PDEs	5	0	
Mathematical Models of Financial Derivatives	6	1	
Mathematical Physiology	1	0	
Nonlinear Systems	2	0	
Stochastic Modelling of Biological Processes	5	-	1

Waves & Compressible Flow	2	0	

Trinity Term	Passed	Failed	Pending
C++ for Scientific Computing	10	-	1
Python in Scientific Computing	10	1	
Solving PDEs on Supercomputers	1	0	
Numerical Analysis of SDEs & SPDEs	2	1	
Numerical Solution of Navier-Stokes Equations	4	0	

E. Special Cases

Removed from public version of the report.

F. Names of members of the board of examiners

Prof J Tanner (Chair)
Prof P Dellar
Prof I Sobey
Prof A Fowler
Prof RE Wilson (External Examiner)