MSc in Mathematical and Computational Finance

Examiners' Report 2022-23

July 2023

Part I
A. **STATISTICS**

    i.   **Numbers and percentages in each class/category**

Class	Number				Percentage (%)			
	2022/23	**2021/22**	**2020/21**	**2019/20**	**2022/23**	**2021/22**	**2020/21**	**2019/20**
Distinction	11	13	10	13	27	30	29	35
Merit	14	10	16	14	34	23	46	38
Pass	11	19	8	10	27	44	23	27
Fail	4	1	1	0	10	2	2	0
Incomplete	1	0	0	0	2	0	0	0

    ii.   **If vivas are used:**

    No candidates were examined viva voce.

    iii. **Marking of scripts**

    The four written examinations and two take home exams were set and single-marked by lecturers on examined courses and script-checked by a D.Phil. student.

    The two C++ practical exams were marked by a lecturer and checked by a D.Phil student.

    All dissertations were read and marked independently by two Examiners/Assessors with discrepancies resolved by the Examiners/Assessors.

B. NEW EXAMINING METHODS AND PROCEDURES
All written papers were examined in person at the Exam Schools this year and the two C++ assessments were completed as in person exams at Ewert House, with submission to Inspera. For C++ assessments candidates were given an extra 30 minutes of technical time to upload their submissions.

The take home exam on Deep Learning was extended from a 2-day assignment to a 7 day assignment due to the change in the EAF which stated that no submission should be less than 5 days in total.

B. Please list any changes in examining methods, procedures and conventions which the examiners would wish the faculty/department and the divisional board to consider.

C++ assessments will take place as online open-book exams for 2023-24 and take-home assignments will also be conducted as online examinations instead of submissions.

D. Please describe how candidates are made aware of the examination conventions to be followed by the examiners (Please attach to the report a copy of the examination conventions and any other relevant documentation, including the relevant standing orders – see *Examination Regulations*, Regulations for the Conduct of University Examinations, Part 4, cl. 4-1-4.2,
[2019-20, Regulations for the Conduct of University Examinations: Part 4 Examiners: Period of Office, Casual Vacancies, Resignation, and Removal (ox.ac.uk)](ox.ac.uk)
Examination conventions for this course are included in the Course Handbook.

Part II

A. GENERAL COMMENTS ON THE EXAMINATION

Overall the exams went well. The only matter that needed addressing was an error occurred in the final copy of paper C where an equation was omitted from Question 2 of the Fixed Income section. The proctors were informed and advised that the exam board take appropriate measures to ensure no candidate would be disadvantaged due to the error occurring. The affected part of the question was not marked and the marks were redistributed across the rest of the question parts.

There were only four dissertations extensions submitted this year of which none was longer than one week, so all dissertations were able to be marked before the final exam board meeting.

B. EQUAL OPPORTUNITIES ISSUES AND BREAKDOWN OF THE RESULTS BY GENDER

There were 21 female candidates and 20 males. Among the 21 female students, 6 received a distinction, 6 received a merit, and 4 received a pass, while 4 students failed the course. One student received an incomplete result.

Among the 20 male students, 5 received distinctions, 8 received a merit, and 11 received a pass.

C. NUMBERS ON CANDIDATES' PERFORMANCE IN EACH PART OF THE EXAMINATION

The written papers, statistics take home exam and C++ Part I required some scaling from raw marks to USMs while the Deep Learning assessment only required a small amount of scaling in order to bring them into line with the other components of the examination.

The C++ Part II exam had exceptionally high marks, but the exam board decided to keep the marks as reflected and not to apply any scaling.

Exam	Distinction	Merit	Pass	Fail	Average USM	Standard Deviation
Paper A	11	7	14	8	61	13.39
Paper B	14	5	17	4	64	12.26
Paper C	12	5	12	11	61	13.24
Paper D	11	7	14	8	62	13.34
Component I	11	6	18	5	61	15.03
C++ Part I	11	5	12	13	60	20.7
C++ Part II	38	0	1	2	88	14.25
Statistics Take Home	13	5	23	0	63	9.48
Deep Learning Take Home	40	0	1	0	88	7.43
Component II	18	8	14	3	75	9.51
Dissertation (Component III)	16	12	13	0	68	7.73
OVERALL	**11**	**14**	**11**	**4**	66	10.31

D. COMMENTS ON PAPERS AND INDIVIDUAL QUESTIONS

In general, the students performed well, especially in C++ Part 2 and the Deep Learning exams. The students' performance in Papers C and D was however again very poor.
For Paper C, eleven candidates did not pass the exam while for Paper D, eight candidates failed to pass the paper.

E. COMMENTS ON THE PERFORMANCE OF IDENTIFIABLE INDIVIDUALS AND OTHER MATERIAL WHICH WOULD USUALLY BE TREATED AS RESERVED BUSINESS

The prize for the highest marks achieved for the MCF course was awarded to the top candidate with a final USM of 83.

The first MUFG Securities prize for the best dissertation was awarded to the candidate with the highest dissertation mark which was 84.

One candidate has submitted 4 separate mitigating circumstances for January exams/assessments and the examiners examined these carefully and took the appropriate action.

Four students have failed this course due to failing to secure an average of 45 in the first assessment unit which consists of the written exams. They will be allowed to resit the written examinations they have failed in the following year.

F.   NAMES OF MEMBERS OF THE BOARD OF EXAMINERS

Prof Rama Cont (Chairman)
Prof Michael Monoyios
Prof Christoph Reisinger
Prof Hanqing Jin
Prof Vicky Henderson (External Warwick)