MSc in Mathematical Modelling and Scientific Computing

Examination Conventions Summary

15th October 2026

Draft Examination Conventions

The DRAFT Examination Conventions can be found online at https://www.maths.ox.ac.uk/system/files/attachments/draft_examination_conventions_2026.pdf.

These will be confirmed at the M.Sc. Supervisory Committee meeting in week 4 and the confirmed version will be uploaded to the course webpage and circulated round the mailing list.

Please take time to read the conventions carefully.

Examiners

There are four internal examiners: two from OCIAM/WCMB and two from Numerical Analysis/Machine Learning and Data Science. There is also one external examiner. The examiners for 2026–27 are:

- Mike Giles (Chair)
- Mohit Dalwadi
- Elizaveta Rebrova
- Robin Thompson
- David Hewett (external, from UCL)

You should not make contact with individual internal or external examiners about any matters relating to the examination of the course.

How to Complete MMSC

To complete MMSC you must complete 12 units for credit:

- 2 written examinations on core courses in mathematical methods (1 unit each);
- 2 out of 3 written examinations on core courses in numerical analysis (1 unit each);
- 1 special topic based on a modelling/methods lecture course (labelled [M]) (1 unit);
- 1 special topic based on a computing lecture course (labelled [C]) (1 unit);
- 1 case study in mathematical modelling (1 unit);
- 1 case study in scientific computing (1 unit);
- 1 dissertation and viva (4 units).

You may also take up to three additional units:

- the third written examination on a core course in numerical analysis;
- one or two further special topics.

Meaning of USMs

Each unit is given a USM (University Standardised Mark) out of 100. The USMs, weighted as above, are averaged to give an average USM. At the end of the course you will be classified on a distinction/merit/pass/fail scale.

The correspondence between USM ranges and classes for individual units is

- 70–100: Distinction
- 65–69: Merit
- 50–64: Pass
- 0–49: Fail

Overall USM

Your final USM, USM*, will be a weighted average of the 12 units that all students will take.

If you take the third written examination on a core course in numerical analysis, your best two marks on the numerical analysis examinations will contribute to USM*.

If you take one or two extra special topics, your best mark for an [M] special topic and your best mark for a [C] special topic will contribute to USM*.

We refer to the individual USMs which contribute to USM* as "contributing USMs".

Classification

You will be awarded a distinction if you fulfil all the following criteria:

- USM$^\star \geq 70$;
- All contributing USMs ≥ 50;
- Dissertation and Viva USM ≥ 65.

If you are not awarded a distinction, you will be awarded a merit if you fulfil the following criteria:

- USM$^\star \geq 65$;
- At least 11 contributing USMs ≥ 50.

If you are not awarded a distinction or a merit, you will be awarded a pass if you fulfil the following criteria:

- USM$^\star \geq 50$;
- At least 9 contributing USMs ≥ 50.

If you are not awarded a distinction, a merit, or a pass, you will fail the course.

Units over the required 12

Note that USMs for units over the required 12 do not contribute to USM* and have no effect on the classification of the degree.

Resits

If you fail the MMSC overall you may resit on at most one subsequent occasion. This resit attempt will normally be the following year, but may be deferred once. In such a case you will not be eligible for a merit or distinction on the whole course.

The examiners will specify at the time of failure which of the assessed components of the course may or must be redone. Usually, you will be permitted to resit any component for which you received a "failing" USM (i.e. 49 or below) but you will not be permitted to resit any component you have already passed (i.e. achieved a USM of at least 50).

Resits

If you resit a unit for which a technical fail mark was originally awarded (a unit for which no work was submitted or a written examination was missed), you will have the mark for that unit capped at 50.

No student who has satisfied the examiners in any one of the examinations may enter again for the same examination.

If you fail one particular unit, there is no provision for you to resit that unit during the same academic year.

Core Courses

Core courses are assessed by invigilated written examinations taken in Weeks 6–8 of Trinity term.

All exams last 1.75 hours and consist of 3 questions.

You may attempt as many questions as you wish, but only the best two answers will count towards your final mark for the paper.

Each question will be worth 25 marks and will be marked according to an approved marking scheme.

A script checking process will then be used to ensure that all work has been marked and that the marks have been correctly totalled and recorded.

Written Examinations — Scaling

The Board of Examiners for MMSC will assign USMs for each paper, which may involve scaling the raw marks using a continuous piecewise linear map (spline). The examiners may choose to scale marks where in their academic judgement:

- a paper was more difficult or easier than in previous years; and/or
- a paper was more or less difficult than other papers taken by students in a given year; and/or
- a paper has generated a spread of marks which is not a fair reflection of student performance on the University's standard scale for the expression of agreed final marks, i.e. the marks do not reflect the qualitative marks descriptors.

Such scaling is used to ensure that candidates' marks are not advantaged or disadvantaged by any of these situations.

Special Topics

You must do one special topic in the area of Modelling/Methods [M] and one in the area of Computation [C].

Special topics are assessed by mini-projects of approximately 15 pages in length (up to a maximum of 20 pages without penalty) which are independently marked by two assessors, usually the course lecturer and another member of faculty.

These two marks are then reconciled if necessary (if the marks differ by more than 10 or are on opposite sides of the pass/fail borderline).

Case Studies

The scientific computing case studies are assessed by a written report of up to 20 pages (penalties apply for longer submissions). The projects are independently marked by two assessors — usually the course convenor and a second assessor. Marks are reconciled if necessary.

The mathematical modelling case studies are assessed by an individual written report of up to 16 pages (penalties apply for longer submissions), and a group presentation. The report contributes 80% of the mark and the presentation 20%. Reports are independently marked by two assessors — usually the course convenor and the project leader. The presentation marks are agreed by at least two assessors.

Dissertation

You must complete a 4-unit dissertation.

The dissertation is assessed by written report (approx. 40–50 pages; up to 50 pages without penalty) and a viva voce examination.

The dissertation is read and marked by two internal assessors, neither of whom is your supervisor. The external examiner also reads a selection of the dissertations.

The assessors for the viva voce examination will be the assessors who have read the dissertation.

The USM will include credit for originality and performance in the viva.

Non-Attendance at Written Examinations

Rules governing non-attendance at examinations and any consequent penalties are set out in full in the Examination Regulations (Regulations for the Conduct of University Examinations, Part 14).

In cases where the Proctors do not believe there are satisfactory reasons for non-attendance or an application to the Proctors has not been submitted, a mark of zero will be awarded for the unit. In this case, the mark for any resit of the exam (only allowed if you fail the M.Sc. overall) will be capped at 50.

If you will be prevented by illness or other urgent cause from attending one of your examinations you should contact your college office or college advisor as soon as possible.

Late Submission of Coursework

If you will be prevented by illness or other urgent cause from submitting your coursework on time you can apply for an extension.

You can apply through student self-service for a one week self-certified extension (twice during the academic year).

If you require a longer extension, you should contact your college office or college advisor as soon as possible. Your college will be able to submit an application for an extension of time to the Proctors on your behalf.

Where permission to submit late has not been granted by the Proctors there will be academic penalties. In this case, you must inform your college of any mitigating circumstances as soon as possible, so that the college can make an application to the Proctors if appropriate.

Failure to Submit Coursework

Failure to submit a required element of assessment, without an accepted reason, will result in the failure of that assessment and a mark of zero. In this case, the mark for any resit of the assessment (only allowed if you fail the M.Sc. overall) will be capped at 50.

Alternative Examination Arrangements and Mitigating Circumstances Notices to Examiners

A candidate in any University Examination with specific learning difficulties or disability/illness may apply through the Senior Tutor of their college for alternative examination arrangements relating to their condition.

Candidates who would like the examiners to be aware of any factors that may have affected their performance before or during an examination are advised to discuss their circumstances with their college and consult the Examination Regulations (Part 13). Candidates should complete the form entitled "Mitigating Circumstances Notices to Examiners" and send this to their college with appropriate supporting material. The candidate's college will submit the application for forwarding to the Chair of Examiners.

Miscellaneous

The conventions also give class descriptors, and describe how you will get feedback, as well as detailing formats for submitted reports, penalties for late submissions, and penalties for over-long submissions.

Note that if assessors believe you have not adhered to the required submission format (font size, margin size etc), the examiners may request your LaTeX source to check if you have followed the restrictions.

There is also detail about plagiarism and the use of AI.