

Mathematical Institute and Department of Physics

DRAFT Examination Conventions 2026-2027

Master's in Mathematical and Theoretical Physics (MMathPhys)

MSc in Mathematical and Theoretical Physics (MSc MTP)

1 Introduction

Examination conventions are the formal record of the specific assessment standards for the course or courses to which they apply. They set out how examined work will be marked and how the resulting marks will be used to arrive at a final result and classification of an award.

This document sets out the examination conventions for the Master's in Mathematical and Theoretical Physics (MMathPhys) and the M.Sc. in Mathematical and Theoretical Physics (MSc MTP).¹ These examination conventions are approved annually by the Joint Supervisory Committee for the MSc in Mathematical and Theoretical Physics and Master of Mathematics and Physics. The Board of Examiners may make only minor deviations from these conventions in exceptional circumstances and only after the consent of the Proctors.

This document is in all ways subsidiary to the current

[Examination Regulations](#)

[Examinations and assessment framework \(EAF\)](#)

2 General Structure of the Examination

2.1 Unit weighting

This Master's programme gives each course a unit weighting, typically corresponding to the number of lecture hours it comprises.

Lectures	Units	Example
8 hours	0.5	Topics in Soft and Active Matter Physics
12 hours	0.75	Quantum Processes in Hot Plasma
16 hours	1	Advanced Fluid Dynamics
24 hours	1.5	Groups and Representations
28 hours	1.75	Kinetic Theory

¹ Note that certain lecture courses offered within the MMathPhys/MScMTP are Part C Mathematics courses offered within the MMath and MSc in Mathematical Sciences programmes. Assessment for these courses is the responsibility of the Part C Examiners and follow the rules set out in the corresponding examination conventions. Likewise, where an approved course is taken from Part C Mathematics, Physics, or Computer Science, assessment for these courses follow the rules set out in their respective examination conventions.

Standard dissertations, of up to 30 pages, are considered one unit. Extended dissertations, of up to 60 pages, are two.

Students may, with specific permission from the Course Director, substitute up to a maximum of **three units** with appropriate courses of study from outside the published list. These will normally be from the Departments of Mathematics, Physics, or Computer Science.

2.2 Assessment methods

All courses in this programme are assessed by homework completion and/or a formal assessment, which can be in-person written examination, take-home examination or mini-project. A one-unit or two-unit dissertation is optional and considered a formal assessment.

Some courses have a choice of assessment method, in which case candidates may choose which method they prefer. There may be a small number of courses that entail more than one assessment method. Not all assessment methods may be available in any one year.

2.3 Course Requirements

For the purposes of these conventions, ‘offer’ means to attempt the assessment, i.e. sit the examination and/or submit the written assignment.

All students are required to offer **at least ten units** of courses. Of these ten,

- 4 **must be** in-person invigilated exams
- 3 **must be** further formal assessments:
 - in-person invigilated exam
 - take-home exam
 - mini-project
 - dissertation
- 3 **may be** any assessment method available, including homework completion.

This is a pre-requisite to passing the degree and must be followed. It is the student’s responsibility to ensure that these requirements are fulfilled.

3 Assessments

3.1 Invigilated Written Examinations

The duration of written examinations will normally be 1.75 or 2 hours for a 16-hour lecture course and 3 hours for a 24-hour or 28-hour lecture course. Candidates will typically be asked to answer two (three) questions for 16-hour (24/28-hour) lecture courses, each worth 25 marks.

Written examinations will be marked by a single assessor according to pre-agreed model solutions and marking schemes. The examination scripts will then be checked by an independent checker to ensure that all work has been marked, and that the marks have been correctly totalled and recorded.

The use of handheld pocket calculators is generally not permitted but certain kinds may be permitted for some papers. Specifications of which types of calculator are permitted for any such exceptional papers will be announced by the Examiners in the term preceding the examination.

3.2 Take-Home Examinations

Courses may be assessed by take-home exams. These are written examinations which students are expected to complete at home over a period of several days. Students are allowed to use books, but must not discuss the exam with anybody else. Take-home exams will normally be marked by a single assessor, according to pre-agreed model solutions and marking schemes. The examination scripts are then checked by an independent checker to ensure that all work has been marked, and that the marks have been correctly totalled and recorded.

3.3 Mini-Projects

Mini-projects are normally set by the course lecturer. Mini-projects set for courses in HT will be released to candidates at the end of that term (often Friday of week 8), and the submission deadline will be several weeks later (often at the end of week 11 of that same term). Mini-projects set for courses in TT will be released to candidates on the Monday of week 6 of term, and the submission deadline will be noon on the Monday of week 9 of term.

For Advanced Philosophy of Physics, the mini-project will comprise two essays of at most 5,000 words each. A list of approved essay topics will be released on or before Friday of week 4 of Hilary Term. Students may apply for approval for their own topics following the procedure specified in the Examination Regulations for the Honour School of Physics and Philosophy. Any such application must be received no later than Friday of week 6 of Hilary Term. Essays must be submitted by noon on Friday of week 4 of Trinity Term. The regulations for preparation and submission of the essays are otherwise identical to those governing essays for other Philosophy subjects in Part C, as specified in the Special Regulations for Philosophy in all Honour Schools involving Philosophy.

Mini-projects will be double-blind marked, normally by the course lecturer and one other assessor. The marks of the two assessors will be reconciled following the standard procedure detailed in an Appendix. Qualitative descriptors for levels of performance characterised by ranges of USMs are also given in an Appendix. The exception to this is that mini-projects which have pre-agreed model solutions and marking

schemes will be marked by a single assessor. Such mini-projects will then be checked by an independent checker to ensure that all work has been marked, and that the marks have been correctly totalled and recorded.

3.4 Homework Completion

Some courses are assessed by homework completion; there are three types of such courses:

- courses with formal assessment (an invigilated written examination, a take-home examination, or a mini-project) **and** homework
- courses with formal assessment (an invigilated written examination, a take-home examination, or a mini-project) **or** homework
- courses with homework as the only assessment option (mostly certain advanced courses taught in HT and TT)

Note that Mathematics Part C courses do not have homework.

Where applicable, homework is assigned by the lecturer of the course. The homework problems will be graded using a letter system A/B/C for problems solved or attempted competently (A excellent, B good, C fair), and F for those problems which are not handed in or, if attempted, show insufficient understanding of the concepts taught in the lectures.

A homework assignment receives a Pass if at least 50% of each problem sheet has a grade A/B/C. Otherwise the homework will receive a Fail. The Examiners will make the final determination as to whether or not each student has completed the homework requirement for any given unit.

Students may attend classes and complete the associated problem sheets whether or not they enter for homework completion in their exam entries. Students may enter for the written invigilated exam for a course in the earlier exam entry window. If they decide at a later date that they would prefer to be assessed by homework completion, they may withdraw from the exam entry for the written invigilated exam before the day of the examination and enter for homework completion in the next exam entry window instead.

3.4.1 Late homework submission

Each homework will have a submission deadline after which submissions will not be accepted. Where a homework cannot be submitted on time due to acute illness or other urgent cause, students should submit a request for an extension or excusal for that homework. The process that must be followed for requesting an extension is outlined in the Course Handbook.

3.5 Dissertations

Dissertations will normally be marked by the dissertation supervisor and blind-marked by one other assessor with relevant expertise. The marks of the two assessors will be reconciled as outlined in an Appendix. Qualitative descriptors for levels of performance characterised by ranges of USMs are also given in an Appendix.

A standard dissertation counts for one unit. Subject to permission from the Joint Supervisory Committee, candidates can opt for an extended dissertation with a wider scope which will count for two units.

Students taking dissertations are required to give a presentation to their supervisor and at least one other person. The presentations are informal and can take place in person or online.

The assessors of a dissertation that, in their view, shows particular originality and/or insight may recommend to the Examiners that the dissertation be given a commendation.

The submission deadline for dissertations is noon on Monday of week 6 of Trinity Term.

3.6 Examination Adjustments

The process, deadlines and rules governing adjustment to examination arrangements are set out in full in the Examination Regulations ([Regulations for the Conduct of University Examinations, Part 12](#)). Students apply through their college to request approval for any adjustments to examinations as a result of a disability, a specific health condition or religious observance.

Chairs of Examiners will be notified of adjustments and should make particular note of cases when examinations will be sat at different times from those timetabled for the main cohort, as this may affect planning for marking.

It is your responsibility to request exam adjustments before the deadline and provide any supporting evidence required. Adjustments are not carried over from your previous course and must be applied for again if applicable.

3.7 Penalties for Non-attendance

The process, deadlines and 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 Late Submission, Non-submission, Non-appearance and Withdrawal from Examinations](#)). If a student will be prevented by illness or other urgent cause from attending an examination, they should contact their college office as soon as possible, request an excusal and provide sufficient evidence. Students may apply for an excusal up to 4 weeks before and no later than 14 calendar days after the exam.

Applications under Part 14 are for **acute circumstances only**.

If the Proctors do not believe there are satisfactory reasons for non-attendance, or an application to the Proctors has not been submitted, a candidate will be awarded a mark of zero for that examination.

For Part C students (MMathPhys students), failure to submit a required element of assessment or to attend a required examination without an accepted reason will result in failure of the entirety of Part C (MMathPhys).

For MSc students, failure to submit a required element of assessment or to attend a required examination without an accepted reason will result in the failure of that assessment item.

For the purposes of applying these regulations, an element of assessment will be considered as required if its omission would lead to a failure to offer a sufficient set of units to satisfy the overall requirements of the course.

3.8 Penalties for Late Submission or Non-Submission

The process, deadlines and rules governing late submission and non-submission are set out in full in the Examination Regulations ([Regulations for the Conduct of University Examinations: Part 14 Late Submission, Non-submission, Non-appearance and Withdrawal from Examinations](#)).

Candidates prevented by illness or other urgent causes from submitting an assessment by the deadline should ask their college to request an extension of time

An assessment submitted late, within 14 calendar days of the deadline, without prior permission will be accepted for marking. Academic penalties will be applied as outlined in the below table.

The penalty will be a percentage reduction of the maximum total mark available, for example, in the case of a 10% penalty, 10 University Standardised Marks (USMs) would be deducted. The final mark awarded after application of the penalty cannot be below 0. Penalties will be applied after the work has been marked and the Exam Board has checked whether there are any valid reasons for late submission.

Lateness	Penalty, % point reduction
Up to 4 hours	1 %
4–24 hours	10%
24–48 hours	20%
48–72 hours	30%
72 hours – 14 days	35%
More than 14 days late	Fail

Table 1: Late Submission Tariff for Dissertations, Mini-Projects, and Take-Home Exams

3.9 Mitigating Circumstances

A candidate in any University assessment with specific learning difficulties or disability/illness may apply through their college for alternative examination arrangements relating to their condition. See <http://www.ox.ac.uk/students/academic/exams/examination> adjustments for further information on the process.

Candidates who would like the examiners to be aware of any mitigating circumstances 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) (<https://examregs.admin.ox.ac.uk/Regulation?code=rftcoue-p13mcntoexam>). Students submit Mitigating Circumstances Notices to Examiners through Student Self-Service for consideration by the Board of Examiners.

For further details see <https://www.ox.ac.uk/students/academic/exams/problems-completing-your-assessment>, and in particular the student guide to MCE which can be found at this link. Some examples of mitigating circumstances that may have impacted a student's performance in an examination or during the preparation of coursework include acute illness or unforeseen circumstances such as a traffic accident or bereavement.

4 Poor Academic Practice and Plagiarism

See the University website on plagiarism:

<http://www.ox.ac.uk/students/academic/guidance/skills/plagiarism>

All the assessors for the course will be alert to the possibility of plagiarism in written reports. If an assessor, raises concerns about the proper attribution of a passage or piece of submitted work, the matter will be reported to the Chair of Examiners. If the extent of the material affected is a small proportion of the whole (usually under 10%), this will be dealt with by the Board of Examiners. Assessors will mark the work on its academic merits and the Board will then deduct marks for derivative or poorly referenced work. Boards are free to operate marks deductions of between 1 and 10% (maximum) of the marks available for that particular piece of work.

Where the consequence of the marks deduction would result in failure of the assessment and of the programme, the case will be referred to the Proctors. If a student has previously had marks deducted for poor academic practice or has been referred to the Proctors for suspected plagiarism, the case will be referred to the Proctors. More serious cases of poor academic practice than described above will also be referred to the Proctors.

5 Scaling of Marks

The Examiners may choose to scale marks for assessments where, in their academic judgement:

- a) a paper was more difficult or easy than in previous years, and/or
- b) a paper was more or less difficult than other papers taken by students in a given year, and/or
- c) a paper has generated a spread of marks which are 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. In each case, examiners will establish if they have sufficient evidence for scaling. Scaling will only be considered and undertaken after marking of a paper has been completed, and a complete set of marks for all papers undertaken at a given exam sitting is available. If it is decided that it is appropriate to use scaling, the examiners will review a sample of papers on either side of the classification borderlines to ensure that the outcome of scaling is consistent with academic views of what constitutes an appropriate performance within each class.

7 Degree Classification Conventions

Outcomes for all formally assessed courses will be published as USMs. Qualitative descriptors for levels of performance characterised by ranges of USMs are given below as an Appendix.

A formally assessed course is considered complete if the USM of the assessment is at least 50% and if any homework requirement has been passed. A course assessed wholly by homework is considered complete if the homework has been passed.

The overall USM is calculated by considering all possible subsets of courses offered by the student that satisfy the overall course requirements and taking the maximum weighted (by number of units) average USM amongst all of these subsets, the formula for which is outlined in an Appendix.

For the purposes of these conventions, ‘offer’ means to attempt the assessment, i.e. sit the examination and/or submit the written assignment, and ‘complete’ means to pass the assessment. The overall MMathPhys/MScMTP degree classification is as follows:

- A *Distinction* will be awarded if all of the following conditions are satisfied.
 - i) The candidate offers at least 10 units. These must contain at least 7 formally assessed units of which at least 4 units have a written invigilated exam.
 - ii) At least 10 units have been completed. In exceptional circumstances, the examiners may relax this requirement.
 - iii) Overall USM ≥ 70 .
- A *Merit* will be awarded if all of the following conditions are satisfied.
 - i) The candidate offers at least 10 units. These must contain at least 7 formally assessed units of which at least 4 units have a written invigilated exam.
 - ii) At least 9 units have been completed. In exceptional circumstances, the examiners may relax this requirement.
 - iii) Overall USM ≥ 65
 - iv) The candidate does not qualify for a distinction.
- A *Pass* will be awarded if all of the following conditions are satisfied.
 - i) The candidate offers at least 10 units. These must contain at least 7 formally assessed units of which at least 4 units have a written invigilated exam.
 - ii) At least 8 units have been completed. In exceptional circumstances, the examiners may relax this requirement.
 - iii) Overall USM ≥ 50 .
 - iv) The candidate does not qualify for a merit or distinction.
- A candidate not meeting any of the above will be deemed to have *Failed*.

The Examiners will use their academic judgement to ensure a fair outcome for all candidates, and to produce a consistent ranked list of candidates according to the classification scheme above.

Master of Mathematical and Theoretical Physics: A student on the Master's in Mathematical and Theoretical Physics programme who satisfies the Examiners may supplicate for the degree of Master of Mathematical and Theoretical Physics with the classification determined as above; additionally their transcript will show the classification for Parts A and B as previously assigned by the Part B Examiners in the subject in which he or she sat those parts.

MSc in Mathematical and Theoretical Physics: A student on the MSc in Mathematical and Theoretical Physics programme who satisfies the Examiners may supplicate for the degree of MSc in Mathematical and Theoretical Physics with the classification determined as above.

8 Resits

A candidate who fails to meet the requirements of the programme will be permitted to resit each assessment which they failed on at most one subsequent occasion. Any resit attempt shall normally be taken at the next opportunity, but may be deferred once, *i.e.*, **it must be taken at one of the next two opportunities**. For students on the MSc in Mathematical and Theoretical Physics the Examiners will specify any other components which may or must be retaken. A student resitting any component will not be eligible for a merit or distinction on the whole course. Where a course is no longer being offered in the year of the resit, the Examiners will be responsible for arranging provisions. No student who has satisfied the Examiners in the examination may enter again for the same examination. For more information, please see Part 14 of the Examination Regulations.

An MMathPhys candidate who resits 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) will have that paper assessed on its merits.

An MSc candidate who resits 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) will have the mark for that unit capped at 50.

9 Examiners for 2026-27

The internal Examiners are:

Prof. Fabian Essler (Chair)

Prof Dmitri Uzdensky

Prof Mark Mezei

The external Examiners are:

Prof Steven Tobias, Professor of Applied Mathematics, University of Leeds;

Prof Maciej Dunajski, Professor of Mathematical Physics, University of Edinburgh

Candidates should not, under any circumstances, contact individual internal or external examiners on matters related to assessments. Any communication must be via the Senior Tutor of the respective candidate's college, the Director of Graduate Studies, or the course administration team.

Appendices

A Reconciliation Procedure

The Examiners will follow the procedure below when reconciling marks for assessments which are double-blind marked.

1. The two assessors each read the assessment; the assessors independently produce preliminary marks.
2. If the reports are broadly in agreement and the two assessor marks differ by no more than 10 marks, the assessors can take the average of the two marks as the provisional mark, symmetrically rounded if necessary (for example, 75.49 will be rounded down and 75.50 will be rounded up).
3. If (2) does not apply, then the assessors will confer on the standard of the work with a view to agreeing a mark. E-mail discussions may be sufficient in simple cases, providing nothing is communicated that breaches examination security. The focus will be on identifying the reasons for any difference in the proposed marks.
4. If the two assessors agree on a mark under (3), they report the agreed mark as the provisional mark.
5. If the two assessors cannot agree under (3), they send a summary of the discussion in (3) to the Examiners. The Examiners will appoint a third assessor who will independently assess the project before receiving the marks from the other assessors. The third assessor will make a recommendation to the Examiners.

B Determination of the overall *USM*

An overall average USM will be determined as follows.

Let $\{c_1, \dots, c_n\}$ be the set of formally assessed courses a student has offered. For each of these courses c_i , the number of units of the course is denoted by u_i , the number of units assessed by a written invigilated exam by w_i (zero if the course does not have a written invigilated exam) and the USM achieved by m_i . For a subset of these courses, given by an index set $S \subset \{1, \dots, n\}$, we define the total number of units, $|S|$, the total number of units with written invigilated exam, $\|S\|$, and the average USM, $\bar{S}$, of this subset by

$$|S| = \sum_{i \in S} u_i, \quad \|S\| = \sum_{i \in S} w_i, \quad \bar{S} = \frac{1}{|S|} \sum_{i \in S} u_i m_i.$$

The average USM ($\overline{USM}$) is then defined according to

$$\overline{USM} = \max_{S: |S| \geq 7 \text{ and } \|S\| \geq 4} (\bar{S}).$$

In words, this amounts to considering all possible subsets of courses offered by the student that satisfy the overall course requirements and taking the maximum weighted (by number of units) average USM amongst all of these subsets.

C Qualitative Class Descriptors

Mini-Project Class Descriptors

Mini-projects will be assessed with reference to the following qualitative descriptors:

70–100	The candidate has demonstrated an excellent understanding of almost all of the material covered with a commensurate quality of presentation and has completed almost all of the assignment satisfactorily, further subdivided by: 90–100 The candidate has shown considerable originality and insight going well beyond the straightforward completion of the task set. 80–89 The work submitted shows a near-perfect completion of the task at hand, but does not meet the additional requirements above, or does but has some defects in presentation. 70–79 The work submitted is of a generally high order, but may have minor errors in content and/or deficiencies in presentation.
60–69	The candidate has demonstrated a good or very good understanding of much of the material, and has completed most of the assignment satisfactorily, without showing the level of excellence expected of the above USM range.
50–59	The candidate has demonstrated an adequate understanding of the material and an adequate ability to apply their understanding, without showing the level of understanding expected of the above USM range.
40–49	The work submitted, while sufficient in quantity, suffers from sufficient defects to show a lack of adequate understanding or ability to apply results.
30–39	The candidate, while attempting a significant part of the mini-project, has displayed a very limited knowledge or understanding at the level required.
0–29	The candidate has either attempted only a fragment of a mini-project or has shown an inadequate grasp of basic material.

Dissertation Class Descriptors

Dissertations will be assessed with reference to the following qualitative descriptors:

90–100	Work of potentially publishable standard, as evidenced by originality or insight. The work should show depth and accuracy, and should have a clear focus. It is likely to go beyond the normal MSc level.
80–89	Work in this range will be at the level of a strong candidate for a DPhil applicant. It will have depth, accuracy and a clear focus. It will show a strong command of material at least at the MSc level. It is likely to contain original material, which may take the form of new mathematical propositions, new examples, or new calculations.
70–79	The work submitted is of a generally high order, with depth, clarity and accuracy, but may have minor errors in content and/or deficiencies in presentation. It may contain original material, at least in the sense of new examples or calculations.
60–69	The candidate shows a good grasp of their subject, but without the command and clarity required for first class marks. Presentation, referencing and bibliography should be good, and the mathematics/statistics should have no more than minor errors.
50–59	The work shows an adequate grasp of the subject, but is likely to be marred by having material at too low a level, by serious or frequent errors, a high proportion of indiscriminate information, or poor presentation and references.
40–49	The candidate shows reasonable understanding of parts of the basic material, but reveals an inadequate competence with others. The material may be at too low a level. There are likely to be high levels of error or irrelevance, muddled or superficial ideas, or very poor writing style.
30–39	The candidate shows some limited grasp of at least part of the material.
0–29	Little evidence of understanding of the topic. The work is likely to show major misunderstanding and confusion.