

PROGRAMME SPECIFICATION – MASTER OF STUDIES IN PHILOSOPHY OF PHYSICS

1. Awarding institution/body	University of Oxford
2. Teaching institution	University of Oxford
3. Programme accredited by	n/a
4. Final award	Master of Studies in Philosophy of Physics (one-year course)
5. Programme	Master of Studies
6. UCAS code	n/a
7. Relevant subject benchmark statement	To be confirmed
8. Date of programme specification	October 2008

9. Educational aims of the programme

The aim of the programme is to provide a graduate education in Philosophy of Physics of the highest possible quality, one which will enable students to:

1. undertake original in depth study in (i) Philosophy of Physics; (ii) Philosophy of Science; and (iii) at least one further 'core' area of modern Philosophy;
2. to conduct independent research in Philosophy;
3. produce written work that displays sustained and systematic argument, independent thought and lucid structure and presentation;

The programme will also:

4. provide a foundation on which to go on to pursue doctoral work in Philosophy.

10. Programme outcomes

A. Students will develop a knowledge and understanding of:

1. the background and current developments in (i) Philosophy of Physics; and (ii) Philosophy of Science;
2. some other central philosophical issues, through (i) a further 'core' subject in modern Philosophy; and (ii) attendance at the first year seminar.

Related teaching/learning methods and strategies

Students are taught through a combination of individual supervision and dedicated MSt classes. Both are supported by lectures and other graduate seminars.

For subject (i) *Philosophy of Physics* students will (a) attend advanced undergraduate lecture courses in Intermediate and Advanced Philosophy of Physics; (b) participate in a dedicated graduate class running once per week during the first two terms of the course (the class will involve in-depth study of articles by student presentation); and (c) receive 8 one-to-one supervisions with an expert postholder, one every fortnight during the first two terms of the course (students would choose the topic for discussion by mutual consent from issues arising out of the class and in the lectures; a piece of work would be submitted beforehand which is then discussed with the supervisor, who aims to give constructive criticism of what has been written, to point out any important aspects of the topic that have been overlooked, and to open up further lines of thought).

For subject (ii) *Philosophy of Science* students will (a) attend advanced undergraduate lecture courses in Philosophy of Science; (b) receive 4 one-to-one supervisions with an expert postholder, to be held in their first and second term; and (c) attend the BPhil Philosophy of Science class during their second term.

For their third subject students will (a) attend advanced undergraduate lecture courses; and (b) receive 4 one-to-one supervisions with an expert postholder, to be held during their final term.

In each case, students would learn both by being forced to set out their ideas in an orderly way, with appropriate supporting arguments, and from the criticism that they receive.

For all subjects, graduate students may attend any of the other graduate seminars (including those for the BPhil) provided by the Faculty on a range of philosophical topics.

Supervisions, classes and graduate seminars are supplemented by the undergraduate lectures provided by the Faculty on a full range of philosophical topics, any of which graduate students may attend. Lectures provide an overall perspective on the topic in question, will describe and exemplify suitable ways of thinking about it, and will provide a guide to the existing literature on this topic. They may also discuss current controversies.

Assessment

From discussion of their work in supervisions, MSt classes and graduate seminars students learn how effective their work is. Supervisors write a report at the end of each term, assessing progress during that term, and communicate the content of the report to the student. The reports are also reviewed by the relevant Course Director and the student's College Adviser.

Students are examined during the course of the year by submitting a total of four 4,000 word essays for the three subjects they study (two essays are submitted for the Philosophy of Physics option, and one each for the other two options). Students must reach the pass mark in all parts of the examination i.e. in each of the four essays, in order to pass. Each of the four essays carries equal weight.

B. Skills and other attributes

Students will have the opportunity to develop the following skills during the course:

I. Intellectual skills

Students learn how to analyse and clarify an abstract question, to grasp and critically compare different approaches to answering it, and to develop an approach of their own. They learn how to put complex arguments together for and against a position and how to take them apart. They develop skills in interpreting and analysis difficult texts, often in theoretical and experimental physics, and sometimes produced within a historical context. They learn to construct extensive pieces of writing that provide a clear overview of a subject and a sustained independent argument about it, presented in a lucid, objective and scholarly manner. They develop skills in oral presentation with similar qualities, and they will also consolidate their existing skills in Theoretical Physics.

Teaching/learning methods and strategies

For methods of teaching and assessment see **10A**.

II. Practical skills

Students learn effective time organisation since they must produce extensive pieces of written work at regular intervals. The long examination period which is spread across much of the year requires the ability to sustain intensive work to a deadline over an extensive period. Such skills are needed in many types of career. (They are learnt by experience, are not usually 'taught', except insofar as it is insisted that academic work is of an adequate standard and is produced on time. But advice will be offered if someone is clearly in difficulty on these points. The acquisition of such skills is not something that needs separate 'assessment'.)

Teaching/learning methods and strategies

During the course, students would receive comprehensive training in research methods. This would include: (i) attendance at the weekly Philosophy of Physics seminar in the first two terms (ii) attendance at the weekly Philosophy of Science seminar in the second term; (iii) attendance at the various seminars and classes for an additional approved subject in philosophy; (iv) expertise gained via the one-to-one tuition / supervision sessions that accompany these seminars and classes; (v) attendance at the weekly 'Seminar for First Year Graduates' (a seminar organised by the Director of Graduate Studies and the Course Directors at which all first year graduates in Philosophy are required to attend; the seminar is intended as an introduction to all aspects of graduate work, including research training); and (vi) the training via standard induction sessions for all new graduates (which include instruction in library and IT resources).

III. Transferable skills

As already noted, all the skills mentioned in **BI** and **BII** are transferable skills. As a means to acquiring them, students also learn how to make effective use of libraries, information technology and other sources of information. This too is a transferable skill. It is taught right at the start of the student's career, at what are called 'induction sessions' at the beginning of the first year. It is not assessed, except insofar as the work that results from it is assessed, as already explained.

11. Programme Structures and Features

Learning Year 1

Subjects

During their three terms of study, students are required to take three subjects. Two of these are compulsory (*Philosophy of Physics* and *Philosophy of Science*) and one is chosen from a short list of 'core' subjects in Philosophy (Metaphysics and the Theory of Knowledge; Philosophy of Mind and Action; Philosophical Logic and the Philosophy of Language; Philosophy of Mathematics). Teaching is provided via a combination of individual supervision, attendance at dedicated classes, and attendance at BPhil classes and advanced undergraduate lectures.

Assessment

Each paper is by the submission of 4,000 word essays. Two essays are required for the Philosophy of Physics component (to be submitted at the start of the final term) and one essay each for the other two components (to be submitted after the end of the final term).

For the Philosophy of Physics paper, the essay titles are chosen by the student in consultation with their supervisor. For the other papers, an exam paper is set at a point after the student's completion of the supervisions for that paper. Supervisors are consulted to ensure that appropriate questions are set. Five to six questions are set per paper.

Each essay shall be the candidate's own work. The candidate may discuss a draft (but not more than one) of each essay with his or her supervisor. The candidate's supervisor may provide bibliographical advice on essays throughout.

Each essay is marked independently by at least two assessors according to the conventions set out in appendix one, based on the Humanities Division's recommended examination conventions for taught graduate courses.

12. Support for Students and their learning

A. Libraries

Library provision in Oxford is threefold, at college, faculty and University level.

College Libraries

The college libraries provide at least lending copies of set texts and core secondary works; many have more extensive collections in philosophy. They offer a good working environment, with extensive opening hours including evening and weekend access. College libraries also provide computer access and photocopying facilities, with some variation in provision. Over £40,000 p.a. is spent on philosophy acquisitions by college libraries.

Faculty Libraries

The Philosophy Library, the main central provider for loans to Philosophy students, makes c.65,000 loans p.a. from a book-stock of 22,000 volumes. It takes 68 journals, and holds reference material. Acquisitions spending averages £24,500 p.a. (£16,000 books, £8,000 journals). It offers a good working environment, with 67 desk spaces, 13 computers for reader use, 2 self-service photocopiers and a printer. Specialist staff are always available, supporting a wide range of enquiries and database assistance and training. Its location in the Philosophy Centre allows readers to combine library visits with attendance at lectures and seminars.

Other faculty libraries used by Philosophy students are: Classics Lending Library (Ancient Philosophy), Hooke Lending Library (Philosophy of Science and Philosophy of Mathematics), Social Studies Faculty library (theory of politics and Philosophy of Social Sciences), Theology Faculty Library (Ethics and Philosophy of Religion). All these subjects are also fully covered in the Philosophy Library.

Bodleian Library

The Bodleian Library is the University's largest library, holding the legal deposit collection of all UK copyright books and journals. It also purchases extensively from outside the UK. Spending on non-British philosophy books and journals averages £24,000 (excluding Philosophy of Science). Its staff liaise closely with the Philosophy Librarian and with the academic community, through the Sub-committee for Collection Development in Philosophy.

The most frequently-used philosophy books are housed on open access in the PPE Reading Room of the Old Bodleian. Bodleian books on philosophy of science and mathematics are housed in the separate Radcliffe Science Library, open shelf books on philosophy of religion are housed in the Lower Camera and open shelf books on ancient philosophy are housed in the Lower Reading Room in the New Bodleian. Extensive stacks house less-commonly-used books for order to any desired reading-room. The current PPE Reading Room has extensive computer facilities, including reader printers and self-service photocopying.

Collection Development Policy In the Philosophy Library, the primary focus is on material required for undergraduate and graduate taught courses, with supplementary material complementing these teaching areas, and research-level material to serve graduate needs and the wider academic community. Loan statistics demonstrate a 90% overlap on books borrowed by both graduates and undergraduates. The video collection provides live philosophical debate between eminent philosophers.

The tripartite provision of multiple lending copies in college and faculty libraries and reference copies in the Bodleian Library ensures widespread availability and comprehensive coverage, so that well-organised students may be confident of obtaining most prescribed items and should also find most other books that are cited for additional reading or identified via the excellent bibliographical reference resources. Students also benefit from the good working environment of the various libraries, and, in the Bodleian and the Philosophy Library, from the presence of specialist staff. College libraries generally offer long opening hours and weekend access.

The Philosophy Librarian's role is provide and co-ordinate philosophy provision throughout the University, and to ensure responsiveness to reader needs from a base in the Philosophy Library, which ensures accessibility to library users. As a member of the Faculty of Philosophy, and with the advice of the academic Committee for Library Provision in Philosophy, she is well-placed to encourage co-ordination between teaching needs and resources.

B. IT Resources

The use of IT within the graduate degree course is significant and growing. Learning materials and past examination papers can be downloaded from the web and graduates are encouraged to develop their IT skills. There is an extensive network of IT resources and support in Oxford.

The *University Computing Service* provides facilities and classes at a variety of levels, from those suitable for beginners through to those aimed at students who wish to learn to use very sophisticated programmes and computing languages. Several of these are specifically geared to students in the Humanities.

The *Philosophy Centre* has a graduate computing room with 4 PCs and one Mac, a laser printer and a scanner. The *Philosophy Library* has 14 computers for reader use. These computers have access to the University's extensive network of electronic resources and a variety of software. There is a wireless network installed in the Philosophy Centre.

Colleges provide for the use of their graduate students computer rooms with access to the University network, the internet, e-mail, standard software packages, and software for logic teaching. 60% of the student rooms in college accommodation currently permit internet access.

The Philosophy Centre, colleges and OUCS all have IT Support Officers available to train and assist students.

Networked resources within the University domain include:

1. OLIS (Oxford Libraries Information System), the University's union library catalogue, networked throughout the University and showing library holdings of 5.5 million books in 80 Oxford libraries including the Bodleian, the faculty libraries and many college libraries;
2. the University's extensive network of databases, including the Philosopher's Index, the Routledge Encyclopaedia of Philosophy;
3. many on-line Philosophy journals, and an expanding collection of full-text CD-Roms of philosophical writings (Past Masters Series).

C. Academic Support

At the start of their course students attend induction programmes run by the Faculty and by their college. These provide an initial orientation and essential information in a user-friendly form.

Students are provided with the relevant parts of the University's *Examination Regulations*, which specifies the overall structure of their course and details the examination arrangements. They are also given the Handbook for the MSt in Philosophy of Physics, which repeats this information in a more digestible form, includes further relevant information (e.g. on assessment criteria) and offers advice on how to set about organising one's work and choosing one's options. Students may also consult past examiners' reports, which are available in the Philosophy Library and on the web and which contain some advice on good and bad ways of answering an examination question. It is envisaged that in due course the Philosophy Faculty Library will contain some specimen MSt exam essays to give some idea of the standard expected from a passing script.

Graduate supervisors on the student's options or thesis, the relevant Course Director and the Director of Graduate Studies provide academic guidance throughout the student's course. They make it clear to the student how he or she is progressing and they assist in making decisions on how best to structure the course overall and what particular options to choose within that structure. They arrange all the student's tuition and expect to be available for consultation without delay on any topic, including pastoral matters. The student's College Adviser (normally a philosopher) is also available for consultation.

D. Pastoral, Welfare and Financial Support

The colleges have many ways of providing support and guidance on pastoral, welfare and financial matters. Each graduate will have a college tutor assigned to him or her as their 'college adviser', who is responsible for offering such assistance. But others available in such a case usually include the head of the College, the Tutor for Graduates, the Dean (or Assistant or Sub-Dean), MCR Welfare Officers, the College Chaplain, the Adviser to Women, the College Nurse or the College Doctor. All Colleges also have harassment advisers and many have funds to alleviate genuine cases of financial hardship.

The University provides a Counselling Service for those in need of professional advice and there are also University Committees on Student health and on Disabilities, which are responsible for special provision in appropriate cases. Special arrangements are made for candidates in University examinations who are dyslexic or disabled or in some other way unable to conform to the behaviour expected of most candidates (e.g. because they cannot sit papers on the Jewish Sabbath). Information about these services is contained in college handbooks and in the Faculty's Handbook for the MSt in Philosophy of Physics. On the Faculty side, students may approach their supervisor, the Course Director, the Director of Graduate Studies or the Graduate Studies Administrator for assistance on any matter. The Faculty also has two harassment advisers and provides some funds in cases of financial hardship.

The Faculty has an active Placement Service and a dedicated Placement Officer to provide information and advice on careers within philosophy to all graduate students. The University Careers Service is also very active, and very successful, in helping to find employment for those finishing their degree.

13. Criteria for Admission

The rigorous admissions process, conducted by the Philosophy Graduate Studies Committee, involves careful reading and discussion of applicants' dossiers by at least two members of the Faculty (the Director of Graduate Studies and the Director of Graduate Admissions initially assess every application for graduate study in philosophy at Oxford). Dossiers include three references, academic history, a personal statement, and written work of a prescribed length. Since many candidates are from abroad, none are interviewed. A strong university-level background in physics is required and the aim of the committee is to admit suitably qualified candidates well-matched and committed to the course and wishing to study the Philosophy of Physics. Because the amount of available supervision is limited, it may not be possible to offer all well-qualified candidates each year a place.

14. Methods for evaluating and improving the quality and standards of learning

The Faculty obtains student feedback on lectures, classes and seminars each term, which is considered by, amongst others, the Philosophy Graduate Studies Committee and the Graduate Joint Consultative Committees. Any recommendations arising from these committees are considered seriously by the Faculty Board. Each MSt student is also asked to complete an overall course questionnaire at the end of the course: returns are considered in the first instance by the Graduate Studies Committee which reports to the Faculty Board and raises key issues for discussion at meetings of the Graduate Joint Consultative Committee.

Examiners write detailed reports on the examinations that they have conducted, which indicate (inter alia) the standards that the students are actually achieving. External examiners also submit their separate reports, which add (inter alia) some consideration of the appropriateness of the syllabuses for particular papers and of the way in which they are taught, and some comparison of the standards achieved at this University with the standards achieved elsewhere. The Philosophy Graduate Studies Committee considers these reports and any recommendations it makes are considered seriously by the Faculty Board. (The reports are further considered at the Divisional level and by the Educational Policy and Standards Committee of the University.)

In addition, those who undertake teaching for the MSt in Philosophy of Physics may make proposals for reform at general meetings of the Faculty. As a result, changes in regulations are often made. The results are incorporated in revised versions of the Handbook for the MSt and the *Examination Regulations*.

In the early years of the course the Philosophy Graduate Studies Committee and Faculty Board will undertake, in consultation with the philosophers of physics and other interested parties (including graduate students, examiners, assessors, external experts etc), to closely monitor the course. This includes a comprehensive review at the end of each of the first five years. In particular, the reviews draw on comments made in internal and external examiners' reports, and feedback provided by students (on the course as a whole, as well as its constituent parts).

New academic staff attend courses to train them in how to teach. These are organised by the Institute for the Advancement of University Learning (IAUL), which has been set up within the University to carry out research into the training of university teachers as well as to supplement that research by employing the most effective methods of training. The Institute also runs courses to train graduate students who undertake some undergraduate teaching and this is supplemented by one or more courses organised by the Faculty each year. In addition, each new member of staff is assigned some more experienced member as 'mentor', who is responsible for giving advice and guidance on both teaching and research, especially during the first two years. Appointments are standardly made for five years in the first instance and a more formal review of the performance of new members of staff is conducted during the fifth year, with a view to determining whether re-appointment to the retiring age is appropriate.

All academic staff are subject to annual appraisal by a nominated peer appraiser, with an interview every five years (or more frequently, if requested by appraiser or appraisee). The emphasis of the appraisal scheme is on reflection and self-assessment, but it should bring to light any problems that need to be addressed at either college or Faculty level.

15. Regulation of assessment

Final Examination

The final assessment of a student, i.e. whether they pass or fail the MSt, depends only on their performance in examination. This is conducted by a board of examiners, appointed by the Faculty of Philosophy, but also including one external examiner appointed by the Vice-Chancellor. The Board of Examiners determines whether each candidate passes or fails, having regard to guidelines agreed beforehand by the Philosophy Graduate Studies Committee. These guidelines are published in the Handbook for the MSt and therefore known to the candidates. When the examination is completed, the examiners submit a report on what they have done, which is scrutinised both by the Philosophy Graduate Studies Committee and the Faculty Board. The report is also discussed at Faculty meetings open to all members of each Faculty, before being forwarded to the Humanities Division and eventually to the Educational Policy and Standards Committee of the University. But if the report reveals any problems that need to be addressed, suitable action will have been taken before that final stage is reached.

In all of this the external examiner plays a special role. During the examination he or she acts as an impartial adviser, providing informed comment on two major issues:

- (i) to verify that standards are appropriate, in part by comparison with the standards of comparable institutions, and to ensure that the assessment procedures and the regulations governing them are fair and otherwise appropriate; and
- (ii) to ensure that the examination has been fairly conducted and that individual student performance has been properly judged in accordance with the regulations and conventions of the examining board.

The external examiner signs the final pass list, along with the internal examiners, as an endorsement that the processes of examination and classification have been fairly conducted.

After the examination each external examiner submits a separate report (officially addressed to the Vice-Chancellor), which is expected to cover all the following points:

- the standards demonstrated by the students;
- the extent to which standards are appropriate to the degree awarded;
- the design, structure and marking of examination papers;
- the appropriateness of the procedures used in the examination, in this case including not only procedures for the examination papers and theses but also for the oral examination;
- whether or not external examiners have had sufficient access to, and the power to call upon, any material necessary to make the required judgements;
- students' performance in relation to their peers in comparable courses;
- the coherence of the policies and procedures relating to the external examiner and their consonance with the explicit role required of him/her;
- the strengths and weaknesses of the students as a cohort;
- the quality of teaching and learning which may be indicated by student performance.

These reports are considered by all the same bodies as consider the reports of internal examiners, and again any action required is taken long before the final stage of consideration is reached.

Marking Scale

Each element (i.e., each essay and thesis) will be marked on the following numerical scale in the range 0 – 100, with a mark of 60 in each element being the pass mark for the MSt.

75 or above	A script (essay or thesis) will be judged worthy of a mark of 75 or above if it is outstanding, displaying an exceptionally good understanding of the problems, highly intelligent use of relevant literature, commendable lucidity of structure and content, and significant independence of thought.
70 to 74	A script will be judged worthy of a mark between 70 and 74 if it displays good understanding of the problems, intelligent use of relevant literature, commendable lucidity of structure and content, and independence of thought.
65 – 69	A script will be judged worthy of a mark between 65 and 69 if it displays reasonable understanding of the problems, intelligent use of relevant literature, and sufficient lucidity of structure and content.
60 - 64	A script will be judged worthy of a mark between 60 and 64 if it shows reasonable but flawed understanding of the problems, limited use of the relevant literature, and minimal clarity of structure and content. This is the lowest passing mark for the MSt.
59 or below	A script will be judged worthy of a mark of 59 or below if it displays some awareness of the problems and literature, but this is seriously inadequate or the script is otherwise muddled in structure or content. This mark is a failing mark for the MSt.

In marking essays and theses, examiners will always attach particular weight to clarity of thought and expression. Evidence of it to some degree in all parts of the examination is a condition of satisfactory performance; evidence of it to some significant degree is a condition of a mark of 70 or above. Failure to focus on the question asked will be severely penalised.

A candidate for the MSt in Philosophy of Physics will be awarded a distinction if and only if he or she achieves an overall average mark of at least 70 in all elements (i.e. in each essay) with no mark falling below 68.

Late submission of essays or thesis, or any excess of the word limit, however small, is subject to a penalty. This could result in a candidate failing one or more options or the thesis.

At least two examiners (or assessors) will mark each essay. They will be marked by a third marker in case of unresolved disagreement or if the agreed mark is below 60 for the MSt. (The marks and comments of the third marker will be regarded as advisory rather than as determining the outcome.)

Candidates who receive a mark of 68 or above in all parts of the examination will be guaranteed a place as a PRS. Candidates who receive passing marks of 67 or less in one or more parts of the examination will be able to apply to the Philosophy Graduate Studies Committee to continue as a PRS, but will not be guaranteed a place. All candidates intending to continue as PRSs will be required to submit an appropriate thesis proposal. There will be no *viva voce* examinations.

16. Indicators of quality and standards

The Faculty of Philosophy was most assessed for its teaching in a QAA review of Autumn 2000 and it was awarded the highest available mark, i.e. 24 out of 24. In the Research Assessment Exercise carried out in 2001, the Faculty of Philosophy was awarded a 5*.

In 2002, a review of Philosophy was undertaken by the University's Educational Policy and Standards Committee. That review is part of the University's strategy of instituting a regular pattern of reviews of its constituent Faculties and Departments.

The Faculty of Philosophy has its own Consultative Panel whose remit is primarily aimed at alumni and public relations.

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