

GUIDELINES FOR UNDERGRADUATE EXAMINATIONS 2020–21

These guidelines lay out the most important features of the examination process. Senior Examiners in particular should also familiarise themselves with the Board of Examinations *Examiners' Guide*, and also with the *NST Guides for Senior Examiners*.

Appointment of Examiners

Internal Examiners are normally appointed to act for a year at a time but may be reappointed annually for a period of up to three years if the Board requests this. The Senior Examiner is usually in the second year of their appointment. Appointments are made by the General Board, on the advice of the HPS Board. The Senior Examiners must be appointed by the end of the Easter Term preceding the Examination; the other Examiners must be appointed by 30 November of the year preceding the Examination.

External Examiners are normally appointed for three years, on a one year at a time basis; they may exceptionally be reappointed for a fourth year after which they may not be reappointed until a period equal to the last term of service has elapsed, although exceptions may be made in certain circumstances. External Examiners may not hold an office in the University, or a Fellowship or some other office or post in a College, and should not habitually reside within 10 miles of the centre of Cambridge. Former members of staff are not eligible for appointment until at least three years have passed since their departure. Appointments are made by the General Board, on the advice of the HPS Board. The External Examiner answers directly to the Vice-Chancellor, not the HPS Board.

Examiners 2020–21

Part II Senior Examiner: Staffan Müller-Wille

Part II Examiners: Salim Al-Gailani, Hasok Chang, Helen Curry, Lauren Kassell, Tim Lewens, Sam Robinson, Jacob Stegenga

Part II Assessors: Lauren Kassell, Emma Spary (assessor for BBS113/SS11)

Part II External Examiner: Simon Werrett

Part IB Senior Examiner: Matt Farr

Part IB Examiners: Stephen John, Emma Perkins, Nick Hopwood, Daniel Margocsy, Richard Staley

NST Part IB History and Philosophy of Science

NST Part IB HPS will consist of two unseen examination papers:

Paper 1: History of Science

Paper 2: Philosophy of Science

Setting the papers

The examiners are jointly responsible for the questions set in each paper and should meet in the Lent Term to determine which questions to include in the exam papers. Before this meeting, Part IB lecturers are invited to suggest questions; supervisors are also consulted about the topics on which they have supervised, and supervision questions should be available on Moodle for consultation by those setting the paper. The examiners consider past exam papers to ensure that the questions they set are sufficiently different from previous years. The papers will be divided into two sections. Section A will contain two general questions from which candidates will be required to answer one. Section B will contain more specific questions from which candidates will be required to answer three questions. Any changes to the format of the papers (including how many sections there are) and the number of questions candidates are asked to answer must be agreed by the HPS Board and specified by Form and Conduct Notices issued by the HPS Board, and published in the Reporter by the last day of Michaelmas Term. If there are no changes from the previous year, no Form and Conduct Notice need be issued.

Examination procedure

All work submitted for examination is marked anonymously. To preserve anonymity in the exams, students are allocated randomised candidate numbers. The Senior Examiner is responsible for ensuring that one of the internal examiners is present for the first twenty minutes of each examination, and is available on the telephone for the remainder of the examination. The internal examiner is required to wear a gown, and should arrive at the examination room in good time, usually ten minutes before the beginning of the examination. Shortly after the written exams have finished, the work of each candidate will be marked independently by at least two examiners in the subject. The examiners in Part IB HPS then meet to consider the marks. For each candidate, they agree separate marks for Paper 1 and Paper 2, and an overall mark; both papers carry equal weight. The Senior Examiner in Part IB HPS submits the completed mark book to a final Examiners' Meeting, which is attended by all, without exception, Senior Examiners in the Natural Sciences Tripos Part IB. This meeting ensures uniform standards across the different Part IB subjects. The agreed marks are reported to the Board of Examinations and appear in the final mark book. The Senior Examiner should ensure they are familiar with any scaling.

There is no external examiner for Part IB HPS.

NST Part II History and Philosophy of Science

In 2020–21, NST Part II HPS will consist of:

Option A:

- i. Three unseen examination papers chosen from the following six options:

Paper 1: Early History of Science, Medicine and Technology

Paper 2: Sciences and Empires

Paper 3: Modern Medicine and Life Sciences

Paper 4: Philosophy and Scientific Practice

Paper 5: Epistemology and Metaphysics of Science

Paper 6: Ethics and Politics of Science, Technology and Medicine

- ii. One primary source essay of not more than 5,000 words in length on a text selected from a list published in the academic year preceding that of the course and the examination, to be submitted at the division of Lent Term;
- iii. A dissertation of not more than 8,000 words on a topic approved by the HPS Board at a meeting in Lent Term, to be submitted to the Examiners in the first week of Easter Term.

Option B:

- i. Four unseen examination papers, chosen from the list of papers above;
- ii. One primary source essay of not more than 5,000 words in length on a text selected from a list published in the academic year preceding that of the course and the examination, to be submitted at the division of Lent Term.

Scheme of examination

HPS: For all candidates each of the examination papers has a weight of 20% of the overall mark. The primary source essay has a weight of 20% of the overall mark. The dissertation (for those taking option A) also has a weight of 20% of the overall mark.

BBS: Examiners are reminded that the overall marking scheme for Part II BBS is different from that for NST Part II HPS. The dissertation is restricted to 6,000 words, not including summary. The papers taken by BBS

candidates – Paper 107 (Philosophy and Ethics of Medicine), Paper 113 (Early Medicine), Paper 114 (Modern Medicine and Biomedical Sciences) – are minor subjects and count for 16% of their total mark. This is in contrast with Part II HPS candidates, for whom each paper is 20% of the total mark. In an attempt to balance this difference, BBS students taking Paper 113 or 114 will be required to answer three questions in the same amount of time as Part II HPS students have for answering four questions. Examiners who carry over unmodified practices of marking NST Part II HPS to Part II BBS may be viewed as treating the candidates unfairly.

History Faculty Special Subject 11: HST SS11 is the same paper as BBS113. The exam paper should be ready in January for approval by the History Faculty. Two assessors should mark these papers and complete the markbook that has been provided by the History Faculty, including individual marks and comments. According to History Faculty conventions, there is no need to agree a mark. The two individual marks and any comments should be delivered to the Faculty's Teaching Administrator by 18 June at the latest, for incorporating into the HST markbook. The HPS Part II Senior Examiner (Staffan Müller-Wille) and Tamara Hug should be provided with exact copies of this material so HPS can be seen to have had oversight of the process. However, any moderation of marks will be done by the History examiners with the possibility of further consultation with the HPS examiners remaining. The scripts should be returned to HPS as we set and examined the paper. For BBS Paper 113 scripts, the two examiners should agree marks and return these to the Senior Examiner according to standard HPS marking conventions. All scripts should be returned to HPS.

Setting the papers

The examiners are jointly responsible for the questions set in each paper and should meet towards the end of Lent Term to agree the exam papers. Primary source topics should be taken into account in setting the exam papers to ensure that the students are not inadvertently encouraged to make use of material on which they have already been examined. Before the meeting, Paper Managers are asked to compose rough drafts of questions that can be asked on their Papers. To assist in this task the Paper Managers should ask the lecturers to suggest questions in connection with their lectures. Supervision topics should be posted on Moodle along with the reading lists for each paper, and the supervisors may also be consulted about the topics on which they have covered. In compiling the exam papers, the examiners should consider past exam papers, in order to ensure that the questions they set are sufficiently different from previous years.

The External Examiner should be given the opportunity to see and comment upon the draft papers. To assist in this task, the Paper Managers should be asked to provide, along with their draft exam papers, copies of the reading lists and handouts for every lecture course in their papers. This information assists the External Examiner in gauging the relevance of the questions which are being set.

Each of the Part II HPS papers is divided into two sections and candidates are required to answer questions from both sections of each exam paper. In each paper, Section A consists of three general questions which range over the paper; candidates are required to answer one question chosen from this section. Section B consists of more specific questions from which candidates are required to answer three questions. The HPS Board has asked the Examiners to limit the number of Section B questions to nine per paper; these should not normally be disjunctive.

The BBS exam papers are formatted as follows:

- The **Philosophy and Ethics of Medicine** paper has 12 questions divided into two sections, with six questions in each section. Section A is Philosophy of Medicine, Section B is Ethics of Medicine. Candidates are required to answer four questions in total and must answer at least one question from each section.
- The **Early Medicine** paper has 12 questions. It is not divided into sections. Candidates answer three questions in total.
- The **Modern Medicine and Biomedical Sciences** paper follows the same format as Early Medicine.

Submitted work

All work submitted for examination is marked anonymously. To preserve anonymity in the exams, students are allocated randomised candidate numbers. Essays and dissertations are submitted online. They should have numbered pages, footnotes and a bibliography. The length (in number of words) and the name of the supervisor (*but not the candidate's name*) must be stated on the title page. Each essay and dissertation should include a declaration that it is the student's own work, except where acknowledgement is given to the work of others; and that the student has read and understood the Department's policy on plagiarism. Although a dissertation may be on the same topic as the student's primary source essay, it should not include the text of that essay as a proper part. There is no provision for submitting revised dissertations or essays.

The examination

The Senior Examiner is responsible for ensuring that one of the internal examiners is present for the first twenty minutes of each examination and is available on the telephone for the remainder of the examination. The internal examiner is required to wear a gown and should arrive at the examination room in good time, usually ten minutes before the beginning of the examination.

Agreeing marks

Internal examiners agree as many marks as possible before the general examiners' meetings. A third internal reader is found in cases where the two original readers find it difficult to agree and in cases of large discrepancies between the two internal examiners.

Each essay and dissertation is read by two internal examiners from among those appointed for that year, neither of whom will have been the supervisor. All examiners are sent copies of the essays and dissertations they are examining along with a form to be completed with their marks. The two examiners each provide an individual mark and their agreed mark for every essay and dissertation they examine. The External Examiner will be asked to pay special attention to cases where the two examiners give widely differing marks or are unable to agree on a mark.

Examiners do not submit reports on the essays and dissertations. **Instead they should complete a spreadsheet recording raw marks and agreed marks for each essay and dissertation. There is a space on the spreadsheet to make notes that are complete enough to identify the reasons for classification or for giving a fence-sitting mark.** The spreadsheet should be submitted to the Senior Examiner so that the marks can be transferred to the formal markbook.

In the case of the papers, the two first examiners of each paper should meet and try to agree as many marks as possible prior to the Examiners' Meeting. The External Examiner will be asked to pay special attention to cases where the two first examiners give widely differing marks or are unable to agree on a mark.

Shortly after the written exams have finished, the marks for all parts of the course are considered at the Part II Examiners' Meeting. The examiners consider the case of each student individually and an overall mark is agreed for each one. A markbook is completed and the results of the meeting are reported to the Board of Examinations.

Marking and classing procedure

It is important that examiners use the full range of marks for individual questions. This is crucial at both the lower and the upper end of the marking scale. Failure to use the full range of marks for individual questions results in final marks being compressed into a very narrow range.

To be more precise, very poor work should receive a clear fail mark where appropriate. **At the top end of the scale, examiners should use the full fifteen-point band from 70 to 85 for answers that fall into the normal range of first-class answers we expect to see in any year.** Thus, marks in the low 70s indicate work

just better than a very good II.1; mid-to-high 70s marks indicate solid first-class performance, and low 80s indicate very good but not startling first-class answers. The marks above 85 remain to be used (and should be used) to indicate truly outstanding answers.

The final mark of a Part II student is determined simply by calculating the average of all five individual marks (for each unseen paper, the primary source essay and – for students choosing option A – the dissertation). The External Examiner will advise on whether the overall distribution of marks reflects the quality of the work in question, and marks can be adjusted up or down (with preservation of rank ordering) if the External Examiner deems it appropriate. (See below for further elaboration of the role of the External Examiner.)

Plagiarism

Examiners and assessors are asked to familiarise themselves with the Department's and the University's guidelines on plagiarism which can be found on <https://www.hps.cam.ac.uk/students/plagiarism> and <http://www.plagiarism.admin.cam.ac.uk/>.

Candidates are required to upload examined work to Moodle, where it is checked by Turnitin UK. If Turnitin detects matches between submitted work and another source that is higher than 20%, the Senior Examiner will review the resulting originality report to judge whether the matches are innocent, or appropriately referenced (which does not constitute plagiarism) or whether there has been excessive uncited use of material from other sources (which may be considered poor academic practice or plagiarism depending on the extent and context of the matches). At this point, the Senior Examiner may ask the External Examiner for a further opinion and the work may also be referred to the University Proctors for further investigation. In such cases the Turnitin originality report may be used as evidence. If any plagiarism is found, marks may be deducted to take account of poor scholarship and any plagiarised sections, and in the worst case scenario the degree may be withheld. A written record of the procedures followed in any individual case will be kept by the Senior Examiner.

Turnitin is only one method of checking the originality of submitted work and Examiners may initiate other investigative procedures (e.g. searching Google) if they have unresolved queries about the originality of work, regardless of whether Turnitin has substantiated any concerns.

If an examiner suspects that work submitted for examination contains unattributed work from other sources, they should report the matter to the Senior Examiner. The University's procedures for dealing with suspected plagiarism are to be found at <http://www.plagiarism.admin.cam.ac.uk/information-staff/procedures-and-policy-investigating-plagiarism>.

Examiners are asked initially **not** to mark down work in a punitive way on suspicion of wrongdoing, but to provide an assessment of the academic merit of the work **of the candidate**; this will provide a basis for the final result and for any disciplinary actions by the University.

If unacknowledged work is revealed, the examiners may then be asked to attempt to determine its full extent, excise the unacknowledged material and mark the work that remains, taking into account the poor scholarship. In some cases this process may be expected to leave a document that does not meet the basic requirements of the exam.

The role of the External Examiner

We use a moderating External Examiner. The main role of the External Examiner is to ensure that examination and assessment procedures are fair and fairly operated in the classification of students and that the standards of degrees and other awards are comparable to those of institutions of a similar academic level. In order to perform this role, the External Examiner participates fully, with the internal examiners, in the approval of question papers, the assessment of results, including moderation, and the adjudication of borderline and problem cases. In addition, the External Examiner must be given the opportunity to comment on matters apposite to their principal function, in particular on the balance,

content and structure of courses, the appropriateness of the assessment procedures and the general conduct of the examinations.

In this department *the External Examiner is invited to read any piece of work submitted for the Part II examination*. The External Examiner is invited to attend all the Part II Examiners' Meetings, but their presence is not essential except at the final Examiners' Meeting in June. Dissertations, essays and exam scripts are marked in the first instance by two internal examiners. Dissertations and essays are sent to the external examiner for adjudication and moderation before the written examinations start. The External Examiner typically receives good, bad and controversial primary source essays and dissertations, with a table of the individual examiners' marks and their agreed marks. The written exam scripts are made available to the External Examiner before the final Examiners' Meeting, with sufficient time for the External Examiner to be able to read these thoroughly.

The External Examiner can offer a third-party view of work submitted for examination, although it is entirely at the External Examiner's discretion how s/he discharges the role of overseeing the fairness of the exams. The External Examiner may consider borderline cases, especially where overall marks and/or dissertation marks are at the boundary between a class or division of class. The External Examiner reads students' work in cases where there is a marked discrepancy between the two first examiners that has not been resolved by the use of a third reader. The External Examiner is also invited to moderate marks and check that candidates for first class degrees really are first class.

Examiners' reports

Shortly after the final Examiners' Meetings reports are written by the Senior Part IB Examiner, the Senior Part II Examiner and the External Examiner. The Senior Examiners' reports are posted on the Department's noticeboard and website. The External Examiner is required to write a report for the Vice-Chancellor. The Education Committee write to the Department on behalf of the Vice-Chancellor asking for a response to any points raised in the External Examiner's report; these requests are received by the Board and it is the responsibility of the Head of Department to respond to the Education Committee's satisfaction.

Marking scheme

The Department of History and Philosophy of Science uses the following marking scheme:

70+	First Class
67–69	High II.1
60–69	II.1
50–59	II.2
40–49	III
0–39	Fail

Class	Description	Amplifications for Part II dissertations, primary source essays and unseen examinations
I 85+	An outstanding and memorable performance in which all, or virtually all, the qualities deemed to constitute first-class work are present in a remarkable degree.	<i>Dissertation:</i> An outstanding dissertation might be considered the basis for a publication in a journal.
I 70–84	Work which is excellent both in the range and in the command of the material and in the argument and analysis that it brings to bear. The examiner would regard independence of thought as a clear sign of first-class potential. A first-class mark may be awarded on more than one set of criteria. The argument may be sophisticated, incisive or demonstrate flair; there may be a wealth of relevant information, showing exceptional knowledge and understanding of the issues involved: the approach may be unorthodox in the best sense, suggesting new and worthwhile ways of considering material. Many first-class performances will combine elements of all three.	<i>Primary source essay:</i> A first-class essay does not necessarily need to engage extensively with a full range of secondary sources, although it may do so. <i>Dissertation:</i> May display evidence of extensive research imaginatively and convincingly employed. <i>Unseen examinations:</i> An answer judged first-class will always be felt to have engaged closely with the question set, even if it approaches it from an unexpected angle. First-class answers can be unusually long, but they can also be unusually concise.
II.1 60–69	Work showing evidence of a good and broad-based engagement with and understanding of the relevant material and organised in a clearly-argued, well-illustrated and relevant fashion. Work at the top end of this class will usually contain material which displays evidence of high intelligence, and which is regularly, but not consistently, sophisticated in analysis, impressive in its display of relevant knowledge, and occasionally demonstrate flair. The bottom of the range would be competent and accurate in the reproduction of received ideas, the upper end more stylish in thought or apt in its use of example.	<i>Primary source essay:</i> An essay in this class and above will always be judged to have engaged closely with the source. This may involve close analysis of specific passages, extended discussion of the principal arguments, characteristics or theses of the source or the light shed on the source by a closely related work or response to it. <i>Unseen examinations:</i> Credit can be given to a script that for reasons of organisation or irrelevancy would normally be a II.2 if it shows some elements of first-class work. A well-informed and intelligent performance with some first-class quality may fall into this category if the focus is blurry.
II.2 50–59	Competent and broadly relevant work. Lacking organisation or breadth of reference. Essays in this class may occasionally show evidence of poor judgement, contain sections which are poorly related to the main argument and read more like 'prepared material' than an answer to the question, or display lack of clarity in writing.	<i>Primary source essay:</i> An essay that did not engage closely with the source should not be marked higher than II.2. A II.2 is awarded if the source is treated as a pretext or some of the material is extraneous. <i>Primary source essay and dissertation:</i> An argument that is consistently waffly will be awarded a II.2. A thin and inadequately researched dissertation might well receive a lower second. <i>Unseen examinations:</i> A good answer to the wrong question should not be marked higher than II.2. An answer which would normally fall into the II.1 category may fall into this class if it is too short, rushed, unfinished, badly organised, or does not answer the question, even though it may make some good points in other ways.
III 40–49	Work that, while showing some knowledge of the material, is yet seriously deficient in understanding and breadth of reference. Candidates whose work falls into this class may have occasionally completely missed the point of the title, be unduly brief, or fail to adhere to the rubric (for example, by answering intelligently, but on material which was specifically excluded).	<i>Dissertation:</i> Sloppy and badly organised argument and presentation, clear evidence of haste and carelessness will be taken to be evidence of a third-class performance.
Fail 0–39	Irrelevant, ignorant or extremely superficial work. Minimal understanding of material.	Writing little or nothing is a common reason for being placed in this range.