

# MSC IN MATHEMATICS AND FOUNDATIONS OF COMPUTER SCIENCE

## EXAMINATION CONVENTIONS

Each piece of work submitted is awarded a University Standardised Mark (USM) by the Examiners, with a USM of 50 or more representing a pass. To pass the course, passes must be obtained on at least five mini projects that include two on courses from Section B and two at the Schedule II level (these need not be distinct) and for the dissertation. The Examiners may award a distinction for excellence throughout the examination.

The following sets out the conventions for the level of USMs awarded, and the mechanism by which a final USM is determined.

The Board of Examiners consists of at least three (currently four) members, with at least one (currently two) being external to the University. The current Board of Examiners consists of Prof Panagiotis Papazoglou and Prof Samson Abramsky as internal examiners and Dr Ivan Tomasic (Queen Mary University of London) and Prof Igor Potapov (University of Liverpool) as external examiners. (Note: candidates must not under any circumstances communicate directly with examiners.)

Mini projects are set by those giving the courses and are double-blind marked by that person and one other assessor (these two mark the work independent of each other). Each proposes a USM for the work and a range whose maximum and minimum values differ by at most 5 USMs from the proposed USM within which the assessor would be content for the USM to lie. If there is overlap between the ranges proposed by the two assessors and neither of the ranges crosses a classification boundary the two proposed USMs are averaged and rounded to the nearest whole number (.5 is rounded up). In all other cases the two assessors are asked to discuss the mini project to agree on a final USM.

The exception is mini projects which have a model solution and marking scheme approved by the examiners. In such cases each script is marked by an assessor and this marking is checked independently to ensure that all parts have been marked and the part-marks have been correctly totalled and recorded.

The mini projects which are set are submitted to the Examiners for prior vetting, and the Examiners may moderate the marks given by assessors, in particular to achieve parity across subjects. The pass list for each individual course is published before the beginning of the subsequent term and candidates will be advised of the USMs awarded.

The dissertation is marked independently by the dissertation supervisor and by a second assessor. These two marks are reconciled to produce a provisional USM following the same procedures given for mini projects which are double-blind marked above. Each Dissertation will also be seen by at least one Examiner. The second assessor of the dissertation will normally be present at the oral examination, and the Examiners will determine the USM only after the oral examination has been held, taking into account all the evidence from the double-marking, the supervisor's additional input, and from the oral examination.

### **Plagiarism**

The University takes a strong stand against plagiarism.

Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition. Plagiarism may be intentional or reckless, or unintentional. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence.

Where the Chair finds that the matter can be dealt with by the Exam Board, assessors will mark the work on its academic merits. The Board may 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 (i.e. no resit opportunity) the case must be referred to the Proctors.

Please see the University's guidance on plagiarism for detailed information.

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

## **Criteria for the award of USMs**

### **Mini-Projects Qualitative 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 the mini-project or has shown an inadequate grasp of basic material.

### **Dissertations Qualitative 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. The standard one sees in winners of one of the examination prizes.

- 80–89 Work in this range will be at the level of a strong candidate for a DPhil applicant. The project will be an easy choice as a winner of a college essay prize. 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, for example.
- 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 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.

## Formative feedback

From the first term of the MSc students will attend classes and complete problem sheets which will be marked and feedback given.

## Determination of the final USM

To determine the final USM,  $F$ , the dissertation is given the weight of three mini projects; the final USM,  $F$ , is calculated as

$$F = [(X + Y + A + B + C + 3D)/8]$$

where  $X, Y$  are the best two marks on Schedule II courses,  $A, B, C$  are the three highest other marks on mini projects, and  $D$  is the dissertation mark. Passes, merits and distinctions, are determined by the following rules.

- (i) If any of  $X, Y, A, B, C, D$  is less than 50, or if fewer than two Section B courses have been passed, the candidate is **failed**.
- (ii) If *either*
  - (a)  $D \geq 70$  , and  $X, Y, A, B, C \geq 70$   
*or*
  - (b)  $D \geq 80, X \geq 70, Y \geq 67$  and  $(X + Y + A + B + C)/5 \geq 70$ ,

the candidate is awarded a **distinction**.

(iii) If *either*

(a)  $D \geq 65$  , and  $X, Y, A, B, C \geq 65$

*or*

(b)  $D \geq 75, X \geq 65, Y \geq 63$  and  $(X + Y + A + B + C)/5 \geq 65$ ,

the candidate is awarded a **merit**.

(iv) In all other cases the candidate is awarded a **pass**.

[*Note:* Conditions (ii)(b) and (iii)(b) permit the examiners to interpret the requirement ‘excellence throughout the examination’ more broadly, to award a distinction or merit for particular excellence on the dissertation where the mini projects are not uniformly of distinction or merit standard.]

Any candidate who has not satisfied the examiners in four courses, at least one of which shall have been taken from Schedule II and at least one from Section B, by the beginning of the Trinity Term shall be deemed to have **failed** the degree course.

## Resits

A candidate who fails the MSc may be admitted to and examined on the course as offered in one of the two subsequent years. This resit attempt shall normally be taken at the next opportunity, but may be deferred once. In such a case the examiners will specify at the time of failure which of the assessed components of the course may or must be redone.

No piece of written work shall be submitted for examination on more than one occasion. It is University policy that candidates who have initially failed an MSc are not normally eligible for the award of merit or distinction.

## Late penalties

A candidate who does not submit a written assignment on a course for which he or she has entered, by noon on the specified deadline, shall be deemed to have failed the course in question.

## Medical Certificates

The board of examiners will use the following procedure for the consideration of medical and other special circumstances transmitted to them via the Examinations and Assessments Section:

- (a) A subset of the board will meet to discuss the individual applications and band the seriousness of each application on a scale of 1-3 with 1 indicating minor impact, 2 indicating moderate impact, and 3 indicating very serious impact. When reaching this decision, examiners will take into consideration the severity and relevance of the circumstances, and the strength of the evidence. Examiners will also note whether all or a subset of papers were affected being aware that it is possible for circumstances to have different levels of impact on different papers.
- (b) The banding information will be used at the final board of examiners meeting to adjudicate on the merits of candidates;

- (c) A brief, formal record will be kept confirming (i) the fact that information about special circumstances has been considered by the examiners, (ii) how that information has been considered, and (iii) the outcome of the consideration with the reasons for the decisions reached.

Further information on how to make an application for consideration of mitigating circumstances in an examination is available at <http://www.ox.ac.uk/students/academic/exams/guidance>.