

University of Oxford: Department of Mathematics

GUIDANCE NOTES: EXTENDED ESSAYS AND
DISSERTATIONS IN MATHEMATICS

Version 2011/12

Contents

1	Introduction and Key Points	3
2	Why choose to offer a project?	4
3	The amount of work involved	4
4	The formalities	5
5	The project proposal	6
6	Choice of subject	7
7	Supervisors	8
8	Written presentation of the project	9
9	Oral presentations	9
10	Regulations and marking	10
10.1	General Information on Assessment and Marking	12
10.2	Class Descriptors	13
10.3	Prizes	15
10.4	Late Submission of or Failure to Submit Coursework	15

11 Plagiarism	16
11.1 What is plagiarism?	16
11.2 Why does plagiarism matter?	17
11.3 What forms can plagiarism take?	17
11.4 Not just printed text!	18

1 Introduction and Key Points

The Projects Committee for the Final Honour School of Mathematics offers the following notes as guidance to tutors and undergraduates. It should be observed in particular that these notes relate to Mathematics only. In the case of those doing one of the joint schools the notes may provide helpful advice, but they are not intended to be definitive.

A project may take the form of:

- an H-level 7500-word **Extended Essay** in Mathematics (option **BE**) in Part B;
- an H-level 7500-word **Extended Essay** in a topic closely related to Mathematics ('other mathematical' option **OE**);
- an M-level 10,000-word **Dissertation** in Part C of the four-year course (option **CD**);
- an M-level 5000-word half-unit **Dissertation** in Part C of the four-year course (option **CD/2**);
- an M-level 10,000-word **Dissertation** in a topic closely related to Mathematics ('other mathematical' option **OD**);
- an M-level 5000-word half-unit **Dissertation** in a topic closely related to Mathematics ('other mathematical' option **OD/2**).

While Other Mathematical options might, for example, treat relationships between mathematics and music, or topics in the history of mathematics, BE extended essays and CD or CD/2 dissertations must have substantial mathematical content. Students in their third or fourth year may offer one but not both of the Approved Mathematical and Other Mathematical options. Students may offer both an Extended Essay option in their third year and a Dissertation option in their fourth year, if they so wish.

Note these Key Points:

- an extended essay or dissertation will not be accepted for examination unless the project has been approved in advance by the Projects Committee of the Department of Mathematics;
- applications for prior approval of a project must be submitted no later than noon on Friday of Week 0 of Michaelmas Full Term (but may be submitted at any time from the beginning of the preceding Trinity Term);
- applications must contain the **title** and a brief but clear description of the project;

- the description of the project should be such as to convince the Projects Committee that it is appropriate to be offered as an H-level extended essay, or an M-level dissertation, respectively. In particular those offering M-level OD or OD/2 dissertations should note that the level of sophistication expected will be appropriately higher than that required for H-level OE essays.

Note that the Projects Committee may reject a proposal if it has difficulty identifying appropriate assessors. It may also require that a proposal be amended before it can be accepted.

2 Why choose to offer a project?

There are two reasons why project options are offered by the Department. The first is educational. Most mathematics graduates have to write reports of one kind or another. The necessary skills—of collecting material, organising it, expounding it clearly and persuasively—are better learned sooner than later. The second is also educational. The Department recognises that some students might show their abilities better on a sustained piece of exposition than on the problems set in an examination paper.

3 The amount of work involved

A project is of one unit weight, and should therefore be equivalent to two sixteen-hour lecture courses. Accordingly a student might think of the project as being the equivalent of between a half and two-thirds of a term's work. If some preparation has been done in the Summer Vacation, it should occupy between a quarter and one-third of the student's working time during Michaelmas Term, the Christmas Vacation and Hilary Term. For a half-unit M-level dissertation in Part C these estimates should, of course, be divided by two.

There is always a risk that a project might not succeed, especially if the original plan had involved some original research. Although this is a rare occurrence, examiners are aware of the possibility. They accept that a well-written account of the work done, with an explanation of why the original aims were not met, can nevertheless be worthy of high credit.

4 The formalities

Students who have ideas about projects should first seek guidance on content and possible supervisors from their tutors. Members of the Projects Committee will also be happy to help focus a project and find a supervisor. The present Committee is:

- Prof Ben Hambly (Chairman)
- The Director of Undergraduate Studies (ex officio)
- Dr L-F Alday
- Dr D Allwright
- Dr A Dancer
- Prof P Maini
- Dr M Porter
- Dr J Stedall

Students must make initial contact with their supervisor by **15th September**. They must not wait until the beginning of Michaelmas Term. Students should be aware that their tutors and potential supervisors may be hard to contact during the long vacation, and they are advised to sort out a supervisor at the end of the preceding Trinity Term. Supervisors and undergraduates are reminded that a candidate proposing to offer a project option in Part B or Part C must seek prior approval from the Projects Committee. Proposals should be addressed to **The Secretary to the Projects Committee, The Mathematical Institute**, and must be received before 12 noon on Friday of Week 0 of Michaelmas Full Term.

The Committee gives its approval if it estimates that the project is appropriate and viable and that suitable assessors are available. If the committee judges that the project is not on an appropriate subject it will reject the proposal. Similarly, if the proposal does not provide enough information for an assessment to be made it will also be rejected.

The committee will decide during the first week of Michaelmas term which proposals are acceptable. Where a proposal is deemed unacceptable, the candidate will be allowed to submit a version revised along the lines suggested by the committee. This revision must be received by the secretary of the projects committee by noon on Tuesday of second week. If the revised version is unsuccessful, no further resubmission will be allowed. The decisions of the committee will be communicated by email.

This timetable gives the *latest* dates for applications. However the committee is very happy to receive submissions from Trinity term onwards, and will endeavor to process them as soon as it can. In particular, if an undergraduate plans to work on their project over the long vacation, they should seek approval for their project before beginning work.

Applications for approval should be made on the standard form which is appended to the Part B and Part C synopses, and obtainable from the Academic Assistant in the Mathematical Institute and from the Mathematical Institute Projects page:

<http://www.maths.ox.ac.uk/current-students/undergraduates/projects/>

If a candidate wishes to make minor changes to the title or description of their project, they may apply to the Chairman of the Projects Committee for the appropriate permission.

5 The project proposal

The proposal should be at least 100 words, and at most one A4 side. It must be typed, and should be sufficiently detailed for the members of the committee to judge whether the project is of appropriate depth and content and whether it will be possible to find a suitable assessor in the University. Candidates must include details of the *main* references—books, papers, etc—with full bibliographic details.

To ensure that you have included all the information required by the examiners and the committee the appropriate sections of the form should be checked and signed.

Here is an example proposal, with some comments:-

Approximation of Irrational numbers by Rationals
BE Extended Essay
C.F. Gauss (Worcester)

If α is a real irrational number then one can prove that there are infinitely many rational numbers a/q such that

$$\left| \alpha - \frac{a}{q} \right| \leq \frac{3}{q^2}.$$

A number of questions naturally arise. Can one replace the constant 3 by anything smaller? Can one replace q^2 by q^3 ? What happens for specific irrationals like $\sqrt{2}$ or π ?

The essay will discuss such issues. It will give an exposition of the theorems of Liouville, Thue, and Apéry, and describe applications to transcendence problems and Diophantine equations. If time permits a complete proof of the finiteness of integer solutions of the Mordell equation $y^3 = x^2 + k$ will

be given. The latter will use results from the section B ‘Algebraic Number Theory course’.

References

G.H. Hardy and E.M. Wright, An introduction to the theory of numbers, Sixth edition. (Oxford University Press, Oxford, 2008). [Chapter XI in particular]

L.J. Mordell, Diophantine equations, Pure and Applied Mathematics, Vol. 30 (Academic Press, London-New York 1969).

A. van der Poorten, A proof that Euler missed . . . Apéry’s proof of the irrationality of $\zeta(3)$, Math. Intelligencer 1 (1978/79), no. 4, 195–203.

Comments: This is neatly typed, in Latex in fact. The first paragraph introduces the problem to be discussed, and the second paragraph says more precisely what the essay would include. The final sentence tries to set out the relationship to courses on the syllabus. ‘If time permits. . .’ is quite acceptable. It can be hard to tell in advance just where a project will lead one, and just how long work on the other parts of the essay will require. The reference to specific theorems of Liouville etc. will allow the committee to pinpoint the level of difficulty for the project. The three references are not presented in quite the correct style – the essay itself will have to do better! However they do contain the key information. In particular it is good to see that the latest edition of Hardy & Wright will be used, since the previous edition is rather out of date now. Two of the sources cited are text books, but one is a (rather easy) research article. It’s good to see that the essay will look a little further than material that is immediately available in books. It seems that the essay will consist almost entirely of exposition of other people’s accounts, and will probably not contain anything that the candidate has worked out for themselves. That’s hardly unusual at this level. The proposal is only just over 100 words, but is acceptable.

6 Choice of subject

Any mathematical subject (or—in the case of options OE, OD or OD/2—any mathematically related subject) is appropriate as long as it gives the student an opportunity to present his or her own work. It is understood that only in exceptional cases will this include original mathematical research. Often it will be a matter of organising, presenting, or completing material culled (and understood) from advanced textbooks, monographs or journals. There have in the past been projects on philosophy of mathematics, on history of mathematics, on algebra, on number theory, on geometry, on topology, on analysis, on numerical analysis, on mechanics, on mathematical biology,

on finance, on theoretical physics, on mathematics and music, and on other subjects in, or closely related to, mathematics. A list of ideas for projects is available on the Projects page

<http://www.maths.ox.ac.uk/current-students/undergraduates/projects/>
of the Mathematical Institute website. **Suggestions for additions to the list are always welcome and should be sent to the chairman of the committee.** See the London Mathematical Society projects archive

<http://www.maths.abdn.ac.uk/math department/services/lms/projread.html>
for further ideas.

The choice of topic is very wide. However, students should note that certain projects, such as those on historical matters, will only be acceptable under the Other Mathematical options OE, OD and OD/2. Topics in Mathematical Education will not be allowed. For the Approved Mathematical options BE, CD and CD/2 candidates should take particular care to remember that the project must be a mathematical one and will be judged accordingly. The Projects Committee will give advice as to whether a proposed topic is suitable to be considered for a particular option.

It may happen that a student does an Extended Essay one year, and wishes to develop the theme further the following year as a Dissertation. This is permissible, and the extended essay should be referenced in the Dissertation in exactly the same way as any other source. Due care is needed here, see the discussion of ‘Autoplagiarism’ in subsection 11.3.

Similarly an undergraduate may wish to base their project on work done during a summer-studentship. Again this is permissible, providing that the rules of the studentship’s funding body are followed.

In deciding when to approve project proposals the committee will consider how closely the work will relate to existing courses available to the student in the Oxford Mathematics syllabus. Following the principle that a student may not gain credit twice for the same material, projects which relate too closely to courses the student has already taken, or is eligible to take in the future, will not be allowed. For this reason students must declare, on their project application, which courses they have previously taken.

7 Supervisors

A student who, in consultation with his or her tutor, is unable to come up with names of potential supervisors has quite probably chosen an inappropriate subject. Members of the Committee are willing to try to help. Any member of the mathematical faculty may act as supervisor. If it is proposed that any other person should supervise, then prior approval should be obtained from the chairman of the Projects Committee (currently Professor

Hambly).

8 Written presentation of the project

The examiners give credit for qualities such as content, accuracy, organisation, clarity and style. An extended essay or dissertation should be self-contained except insofar as it cites material from Mods, Part A, Part B, and standard works or journals. Proper credit must be given to sources.

Projects must be word-processed. For BE, CD and CD/2 they must be prepared using L^AT_EX, or some other dialect of T_EX. For OE, OD and OD/2 other appropriate packages may be used. **A seminar on the use of T_EX will be offered in Week 5 of Michaelmas Term** (see the lecture list on Mathematical Institute website for the time). Further information is available on the Institute website.

<https://www.maths.ox.ac.uk/help/faqs/latex>

Facilities for T_EX processing are available with a Mathematical Institute Computer account. **Students are advised that they are entitled to apply for such an account, and that they are particularly welcome to use this facility for Extended Essays and Dissertations.** Students who do not already have such an account should collect a computer account application form from reception in the Mathematical Institute.

Students must self-certify the word length of their project, and must specify how the word-count was produced. Various internet applications are available for this, and can be found by a search on ‘Latex word count’.

9 Oral presentations

Each candidate offering a project is required to give an oral presentation to their supervisor and one other person with some knowledge of the field of the project. This presentation forms no part of the final assessment of the project. It is intended to give the candidate an opportunity to practise his/her presentation skills and for the supervisor to test, through questioning, the candidate’s understanding of the material included in the project. It is recommended that this presentation be delivered near the end of Hilary Term and after a first draft has been completed.

10 Regulations and marking

Dissertations and Essays will be assigned USMs according to the same principles as Mathematics papers. In arriving at these marks, the relative weights (for BE Essays and CD or CD/2 Dissertations) given to content, mathematics, and presentation will be 25%, 50% and 25%, respectively. For OE Essays and OD or OD/2 Dissertations on historical or similar topics the examiners will assign 75% for content and 25% for style and presentation. However, the content should have substantial connections with mathematics.

The Regulations governing essays and dissertations follow.

(1) *Subject, authorship, and format*

The subject of the essay or dissertation shall be a project either in mathematics or in the applications of mathematics in another field, which shall be supervised by a member of the Faculty of Mathematical Sciences or, in exceptional circumstances, by some other person of equivalent seniority approved by the Chairman of the Projects Committee of the Department of Mathematics. The dissertation shall be the candidate's own work; it may, for example, be a computation based on known results or a critical review of published mathematics. The supervisor may discuss with the candidate the field of study, recommend references, and discuss what methods are appropriate; the supervisor may also read and comment on a first draft. Every candidate shall sign a certificate to the effect that the dissertation is their own work, except as permitted by this regulation or where acknowledgement is made, and this certificate shall be placed in a sealed envelope bearing the candidate's examination number and presented together with the dissertation. The dissertation should be word-processed, and must be held firmly in a stiff cover. Its length should not exceed the equivalent of 7,500 words (BE or OE), 10,000 words (CD or OD), or 5,000 words (CD/2 or OD/2). The word count may exclude any table of contents, all mathematical equations and symbols, diagrams, tables, bibliography and the texts of computer programs. However any preface, footnotes, and appendices must be included. The certificate of authorship must also include a statement as to the word length, and of the method by which the figure was reached. Project assessors may deduct marks for any failure to meet these conditions.

(2) *Approval of topic*

Candidates intending to offer an extended essay or dissertation shall, after consultation with their tutors, submit through their colleges to the Chairman of the Projects Committee of the Department of Mathematics in the Mathematical Institute the title that they propose together with

- a brief typed description (of at least 100 words) of the project which will be the subject of the essay or dissertation. This should be suffi-

ciently detailed for the members of the committee to judge whether the project is of appropriate depth and whether it is possible to find a suitable assessor in the University. Candidates should include details of the *main* references—books, papers, etc.;

- a letter of approval from the person who has agreed to act as supervisor.

No project or dissertation will be accepted if it has previously been submitted, wholly or substantially, for a degree of this University, or for a degree of any other institution.

The application shall be made not earlier than the first day of Trinity Full Term in the year preceding the examination and not later than noon on Friday immediately preceding the Michaelmas Full Term preceding the examination. The Projects Committee of the Department of Mathematics will decide as soon as possible and in any case not later than Monday of the second week of the Michaelmas Full Term preceding the examination, whether or not to approve the proposal and will advise the candidate forthwith. Details of approved projects shall be forwarded by the Chairman of the Committee to the Chairman of the Examiners not later than the first day of the following Hilary Full Term.

(3) *Submission*

Essays and Dissertations (three copies), identified by the candidate's examination number only, must be sent to **The Chairman of the Examiners, Honour School of Mathematics (Part B), Examination Schools, Oxford**, or **The Chairman of the Examiners, Honour School of Mathematics (Part C), Examination Schools, Oxford**, as appropriate. They must arrive not later than noon on the Friday of the first week following the end of the Hilary Full Term preceding the examination. In addition they must submit an electronic version. The procedure for this will be announced in due course. At the same time, the supervisor shall submit to the Chairman of the Examiners a confidential report, which includes a record of meetings with the candidate, the purpose of which is to help the examiners to determine how much assistance the candidate has received in the preparation of the essay or dissertation; this report will be on a form supplied for the purpose by the Chairman of the Examiners. A candidate may withdraw notice of submission of a dissertation at any time and shall be deemed to have done so if the dissertation is not submitted by the time and date specified unless a special dispensation is received from the Proctors.

The examiners will give Extended Essays BE and OE, and Dissertation CD and OD the weight of one unit. Dissertations CD/2 and OD/2 will have weight one half of a unit.

10.1 General Information on Assessment and Marking

When writing your essay or dissertation, you should be aware of how the examiners will assess it and mark it. The most important point is that for Approved Mathematical topics the project should be in **mathematics**. Do not forfeit marks by making your project inadequately mathematical. In fact, marks are awarded in the following proportions:

Mathematics 50%; Content 25%; Presentation 25%.

For Other Mathematical options marks are awarded in the following proportions:

Content 75%; Presentation 25%.

However it must be stressed that these will be judged bearing in mind the level H or M of the project.

Here is a brief explanation of these terms:

Mathematics: proofs and assertions should be correct, and the mathematics should be appropriate for the level of study. In applied topics, the derivation of the model should be properly justified.

Content: the examiners are looking for some of your own thoughts and contributions: you must do more than rehash text books and lecture notes; you should use original sources; you must not plagiarise [see § 11 below].

Presentation: the mathematics must be clear and well laid out; the English should be clear and grammatically correct; sources should be properly acknowledged, references should be properly cited. Give some thought to notation, choice of typeface, and numbering of equations and sections. Do not fail to number the pages. Be sure to supply complete and accurate references for all the sources used in completing the project, and be sure to cite them properly in the text.

Excellent brief advice on mathematical writing is to be found on the London Mathematical Society website

<http://www.lms.ac.uk/publications/documents/writing.pdf>

Although there are some small differences between American and British styles, the book *A Primer of Mathematical Writing* by Steven G. Krantz, published by the American Mathematical Society (1991) is also recommended, as is the older *How to write Mathematics* by N. E. Steenrod, P. R. Halmos, M. M. Schiffer and J. Dieudonné, American Mathematical Society (1973). Supervisors may recommend papers which illustrate good practice in writing mathematics and in citing sources.

For referencing several conventional systems are in use. Under most conventions the bibliography is listed in alphabetical order of surname of the first author. One convention labels items serially by number; another

uses some form of abbreviation of authors' names for labels; in another item would be referred to by the author's name and the year of publication (Gauss [1801], for example). The London Mathematical Society's advice to its authors at

<http://www.lms.ac.uk/publications/documents/references.pdf>

explains a common version of the first system.

10.2 Class Descriptors

Essays and Dissertations will be assessed with reference to the following class descriptors.

For BE, CD and CD/2

- 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 level for part B (or C as appropriate). 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 level of part B or C as appropriate. 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.

For OE, OD and OD/2

70–100 The candidate shows clear focus on the question, with precise and accurate details (mathematical and other), imaginative selection of examples and appropriate selection and quality (rather than quantity) of sources, and cogent argument, supported by evidence.

Within this band the following finer gradations may be helpful:

- 90–100 Work of publishable quality.
- 80–89 Demonstrates originality of content or insight. Work at the upper end of this range could be publishable after minor improvements. Would be an appropriate entry for a national or university prize.
- 70–79 Work of high or very high quality, but perhaps lacking the originality that would be expected of publishable work. Might be a good candidate, for example, for a college prize.
- 60–69 Work that addresses the given topic, with solid command of factual content, reasonable range of examples and sources, coherent argument and analysis, and correct referencing and bibliography.
(Essays at the lower end of this range may lack some of these qualities or show them only intermittently.)
- 50–59 Work with some use of facts, sources, and arguments, but marred by one or more of a failure to address the topic, serious or frequent errors of fact, a high proportion of indiscriminate information, speculation or unsupported argument, and incomplete or inaccurate referencing.
- 40–49 The candidate shows some knowledge of the topic but the work is marred by several of the following:- high levels of error or irrelevance, muddled or superficial ideas, incoherent or non-existent argument, incompetent use of sources, or very poor writing style.
- 30–39 The work demonstrates a little knowledge of the topic but no coherent argument.
- 0–29 The work demonstrates almost no knowledge of the topic.

10.3 Prizes

The examiners will award one or two Dissertation Prizes of £100 each for the best Part C dissertations (either full unit or half unit).

10.4 Late Submission of or Failure to Submit Coursework

The formal procedures determining the conduct of examinations are established and enforced by the University Proctors. For the Mathematical Institute such examination conventions are set out in the course handbook and in additional supplements. These conventions are a guide to the examiners and candidates but the regulations set out in the Examination Regulations have precedence. The examiners are nominated by the Nominating Committee in the Mathematical Institute and those nominations are submitted for approval by the Vice-Chancellor and the Proctors. Formally, examiners are independent of the Department and of those who lecture courses. However, for written papers in Mathematics, examiners are expected to consult with course lecturers in the process of setting questions.

The paragraphs below give an indication of the conventions to which the examiners usually adhere, subject to the guidance of the appointed external examiners, and other bodies such as the Teaching Committee in the Mathematical Institute, the Mathematical, Physical and Life Sciences Division, the Education Committee and the Proctors who may offer advice or make recommendations to examiners. It must be stressed that to preserve the independence of the examiners, candidates are not allowed to make contact directly about matters relating to the content or marking of papers. Any communication must be via the Senior Tutor of your college, who will, if he or she deems the matter of importance, contact the Proctors. The Proctors in turn communicate with the Chairman of Examiners.

The Examination Regulations stipulate specific dates for submission of the required pieces of coursework to the Examiners, (MuPAD project, OE Other Mathematical extended essay, BE Mathematical extended essay, BSP coursework, N1 coursework, CD dissertation, OD dissertation). Rules governing late submission and any consequent penalties are set out in the 'Late submission of work' sub-section of the 'Regulations for the Conduct of University Examinations' section of the Examination Regulations 2011.

Under the provisions permitted by the 2011 regulation, late submission of coursework for Mathematics examinations will normally result in the following penalties:

- With permission from the Proctors under clause (1) of para 16.8, no penalty.

- With permission from the Proctors under clauses (3) + (4) of para 16.8, a penalty of a reduction in the mark for the coursework in question of at least 5 USMs (or at least 5% of the maximum mark available for the piece of work); the exact penalty to be set by the Examiners with due consideration to the advice given in the document ‘Academic Penalties for Late Submission of a thesis or other exercise: Proctors Notes for Guidance’, dated 1/11/06.
- Where the candidate is not permitted by the Proctors to remain in the examination he or she will be deemed to have failed the examination as a whole.
- Where no work is submitted or it is proffered so late that it would be impractical to accept it for assessment the Proctors may, under their general authority, and after (i) making due enquiries into the circumstances and (ii) consultation with the Chairman of the Examiners, permit the candidate to remain in the examination. In this case the Examiners will award a mark of zero for the piece of coursework in question.

11 Plagiarism

The University and Department employ a series of sophisticated software applications to detect **plagiarism** in submitted examination work, both in terms of copying and collusion. It regularly monitors on-line essay banks, essay-writing services, and other potential sources of material. It reserves the right to check samples of submitted essays for plagiarism. Although the University strongly encourages the responsible use of electronic resources by students in their academic work, any attempt to draw on third-party material without proper attribution may well attract severe disciplinary sanctions.

Below is the University definition of what constitutes Plagiarism. All cases would be regraded as a serious disciplinary matter and could result in your being suspended or being sent down.

11.1 What is plagiarism?

Plagiarism is the copying or paraphrasing of other people’s work or ideas into your own work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.

Collusion is another form of plagiarism involving the unauthorised collaboration of students (or others) in a piece of work.

Cases of suspected plagiarism in assessed work are investigated under the disciplinary regulations concerning conduct in examinations. Intentional or reckless plagiarism may incur severe penalties, including failure of your degree or expulsion from the university.

11.2 Why does plagiarism matter?

It would be wrong to describe plagiarism as only a minor form of cheating, or as merely a matter of academic etiquette. On the contrary, it is important to understand that plagiarism is a breach of academic integrity. It is a principle of intellectual honesty that all members of the academic community should acknowledge their debt to the originators of the ideas, words, and data which form the basis for their own work. Passing off another's work as your own is not only poor scholarship, but also means that you have failed to complete the learning process. Deliberate plagiarism is unethical and can have serious consequences for your future career; it also undermines the standards of your institution and of the degrees it issues.

11.3 What forms can plagiarism take?

- Verbatim quotation of other people's intellectual work without clear acknowledgement. Quotations must always be identified as such by the use of either quotation marks or indentation, with adequate citation. It must always be apparent to the reader which parts are your own independent work and where you have drawn on someone else's ideas and language.
- Paraphrasing the work of others by altering a few words and changing their order, or by closely following the structure of their argument, is plagiarism because you are deriving your words and ideas from their work without giving due acknowledgement. Even if you include a reference to the original author in your own text you are still creating a misleading impression that the paraphrased wording is entirely your own. It is better to write a brief summary of the author's overall argument in your own words than to paraphrase particular sections of his or her writing. This will ensure you have a genuine grasp of the argument and will avoid the difficulty of paraphrasing without plagiarising. You must also properly attribute all material you derive from lectures.
- Cutting and pasting from the Internet. Information derived from the

Internet must be adequately referenced and included in the bibliography. It is important to evaluate carefully all material found on the Internet, as it is less likely to have been through the same process of scholarly peer review as published sources.

- Collusion. This can involve unauthorised collaboration between students, failure to attribute assistance received, or failure to follow precisely regulations on group work projects. It is your responsibility to ensure that you are entirely clear about the extent of collaboration permitted, and which parts of the work must be your own.
- Inaccurate citation. It is important to cite correctly, according to the conventions of your discipline. Additionally, you should not include anything in a footnote or bibliography that you have not actually consulted. If you cannot gain access to a primary source you must make it clear in your citation that your knowledge of the work has been derived from a secondary text (e.g. Bradshaw, D. Title of Book, discussed in Wilson, E., Title of Book (London, 2004), p. 189).
- Failure to acknowledge. You must clearly acknowledge all assistance which has contributed to the production of your work, such as advice from fellow students, laboratory technicians, and other external sources. This need not apply to the assistance provided by your tutor or supervisor, nor to ordinary proofreading, but it is necessary to acknowledge other guidance which leads to substantive changes of content or approach.
- Professional agencies. You should neither make use of professional agencies in the production of your work nor submit material which has been written for you. It is vital to your intellectual training and development that you should undertake the research process unaided.
- Autoplagiarism. You must not submit work for assessment which you have already submitted (partially or in full) to fulfil the requirements of another degree course or examination.

11.4 Not just printed text!

The necessity to reference applies not only to text, but also to other media, such as computer code, illustrations, graphs etc. It applies equally to published text drawn from books and journals, and to unpublished text, whether from lecture handouts, theses or other students' essays. You must also attribute text or other resources downloaded from web sites.

All matters relating to plagiarism are taken very seriously and would lead to a Disciplinary matter.

See for example, The Proctors and Assessor booklet **Essential Information for Students** Section 9, also available on-line at

<http://www.admin.ox.ac.uk/proctors/info/pam/section9.shtml>.