Report requirements

Page limit:

the report should be at least 30 and **no longer than 55 pages.** This page limit excludes all "front matter" (title page, declaration, tables of contents, etc), the Bibliography, and any Appendices. The upper page limit is **strict,** and markers are instructed not to mark material beyond the upper limit.

Page and font size:

the default presentation of the report should use A4 paper size, 11pt font size. Pages should be numbered. Use the frontmatter and mainmatter LATEX commands to control the numbering of your main chapters.

Margins:

Margins should be no larger than the default LATEX margins and no smaller than 2cm in all directions.

LATEX

typesetting is expected and required. We recommend using the standard doc- ument classes of report or book, which support numbered chapters.

Figures and Tables:

Figures should be large enough to be readable, especially any labels of points, axes, and legends. All figures and tables need to be numbered and have a self-contained caption, i.e., one that explains what is shown without requiring the reader to go back to the text. All figures and tables must be referred to and discussed at the appropriate place in the main text. Figures taken from other sources must be referenced.

Abstract:

An abstract (a short summary of the report) is **not** required.

Appendices:

Appendices may be used (sparingly) for supplementary material that is not directly relevant to the main body of your report. Material in the appendices should be self-contained and not extensively referenced in the body of thereport, as this would indicate the material should not be in an Appendix. Again, appendices should not be used to circumvent the page limit (by e.g. moving large plots to an appendix but still discussing them in the report).

Supplementary digital materials:

Additional materials such as code, video anima- tions, etc can be uploaded to the internet (e.g. Dropbox, Google Drive, GitHub, etc) and can then be cited and referenced in your report via a hyperlink to the appropriate URL. It is acceptable to include source code in the main body of your report where it is explicitly discussed and materially important to your project work but note that it would logically then also count towards your page count. Non-essential code can be included in an appendix.

The report should be structured as follows:

- A title page bearing your name.
- The following Plagiarism declaration:
- *This piece of work is a result of my own work except where it forms an assessment based on group project work. In the case of a group project, the work has been prepared in collaboration with other mem- bers of the group. Material from the work of others not involved in the project has been acknowledged and quotations and paraphrases suit ably indicated.*
- Optional abstract, dedication, or acknowledgements.
- A table of contents. Tables of figures, and tables are optional.
- The main body of the report. Typically beginning with an 'Introduction' giving the background to your work, followed by the main content chapters, and then a final 'Conclusion' or 'Discussion' summarising your results and putting them into context. Chapters should be numbered, and divided into numbered sections and subsections appropriately.
- A Bibliography that lists **all** books, articles, papers, computer packages, etc. used or quoted, and the text must contain appropriate citations.

General guidance on writing your report

1. Formal mathematical writing is not the same as casual conversation. You are expected to write with greater formality, care, and precision than when speaking to other people. Recall

also that English is a flexible language, but that there are rules of grammar, and you should follow them.

2. The definitions and statements that you make should be correct and precise. It may well be that you and the reader knows what you meant to say, but the markers read what you write on the page, and do not what they guess might be in your head.

3. The project should be well-organised, and follow a sensible logical structure, often moving from the general to the more specific. Statements should be given at exactly the correct level of generality.

4. The report should contain enough detail for a reader familiar with the material taught in your modules so far to understand what you have done. If necessary, material that you feel is overly technical for the main text can be included in the form of appendices.

5. Read widely and collect material from a variety of sources. Textbooks and academic journal articles are preferred sources to webpages and wikipedia.

6. Develop and use a consistent notation. Different books will use different notations, so to combine this material will require a common notation. Doing this correctly requires a clear understanding of the material.

7. Make sure that your writing is clear and logically structured, e.g. have all the terms in your theorems been defined, do the definitions all come before the theorems?

8. Deviate from the standard text. Do not just follow the definition, theorem, proof sequence given in a particular textbook. Work out what is important about what you want to say, and decide for yourself what should be a lemma, a theorem, or a definition. Explore other texts to explore areas and topics not covered.

9. Clearly explain what you have added in your work: e.g., ‘In [6], Smith sketches a proof that every wotsit is homeomorphic to a doodad; here I shall give the details.’ Another example is ‘Jones’ s proof in [12] is incomplete as she asks the reader at two points why a statement is true. I have provided the answers.’

10. Avoid taking any discussion directly from a source. If you must, then you should quote the source and demonstrate that you understand it by giving a pertinent discussion or a good example.

11. The standard of English, style and overall presentation is your responsibility. Your supervisor is not responsible for proof-reading, or checking your grammar and spelling. However, they should comment in some detail on the clarity and the English and grammar on your submitted draft work.

12. A key point is that you should demonstrate that you understand what you have written!

Formal Marking Guidelines

Class I (70-100)

- The report is well organised into sections and appendices, with appropriate introduction, conclusion, and table of contents. The notation, diagrams, graph and tables are well chosen and used fittingly. A full bibliography is supplied and citations are properly made. Grammar, spelling and typography are correct.
- Excellent general communication of the material at its intended level of exposition. No weaknesses in presentation of material.
- Evidence of significant insight and original thought in communicating critical issues.
- Relative to the difficulty of the material, the candidate required little technical help from the project supervisor.
- Excellent command of expression and logical argument in a skillfully structured report.
- Superior coverage of appropriate material.
- Wide coverage of relevant literature.
- Superior evaluation and integration of relevant literature.
- Correct and appropriate application of known methodology to a novel area of application.
- Evidence of careful attention to critical design issues in the execution of applied aspects of the project.
- Insightful and appropriate choice of data analysis and excellent presentation and reporting of results.
- Clear and coherent interpretation of the data, and/or the results of other studies.
- Comprehensive understanding of the importance of the results in the context of the theoretical framework.

Overall:

Look for the evidence of originality and that the student has mastered material beyond 3H level, and at the level of technical guidance required. A report which is flawless but unoriginal and limited in scope to material at 3H level should not normally be considered for a strong first class mark.

Class I (90-100)

The student shows excellence in all criteria, substantial evidence of originality in approach and interpretation, confident mastery of the content and complexity of the topic, and abundant evidence of background research. The student worked highly independently, with mastery of material beyond 3H level. The written report is authoritative and of publication quality.

Class I (80-89)

The student shows excellence in most criteria and a high degree of competence in the others. T here is good evidence of background research. The student worked highly independently and showed an understanding of material beyond 3H level. The written report is of, or near, publication quality.

Class I (70-79)

The student shows a high degree of competence in all the criteria, but does not meet the requirements for a strong first. A mark in this range might be appropriate where the student has tackled material of a very high level of difficulty, but without demonstrating a full grasp of it.