University of Durham
DEPARTMENT OF MATHEMATICAL SCIENCES

Communicating Mathematics III
Marking Guidelines 2005-2006

Notes for students and markers

Oral presentation and poster.

The oral presentation and poster is assessed independently by the project supervisor and another staff member. The assessment takes into account the features shown on the *Poster and Presentation Assessment* form. The oral presentation and poster comprises 10% of the marks for this module. The final presentation mark, which is decided on the basis of the grades given by the two markers, is reviewed and confirmed by the Board of Examiners in Mathematical Sciences.

Written report.

The written report is expected to be 8,000-15,000 words in length, possibly accompanied by computer printout, and at a level of exposition appropriate to a 3H audience. The report is marked independently by the project supervisor and another staff member, who refers to the Supervision Record. In all cases, markers consider what is achieved relative to what can reasonably be expected in order for a candidate to attain full marks. The written report comprises 90% of the marks for this module. The final report mark, which is decided on the basis of the grades given by the two markers, is reviewed and confirmed by the Board of Examiners in Mathematical Sciences.

Assessment guidelines for the written report.

The following guidelines are grouped by classification, with the intention that a project being awarded a mark within a certain class should normally possess the features for that class. Of course, projects typically exhibit features of different classes, in which case a reasonable balance should be sought. The kinds of features listed here are the kinds of feature one might look for in a project, not the features a project must necessarily possess.

General guidelines are marked • below. Guidelines particularly pertinent to projects with an element of applied work are marked ∗ below. Guidelines particularly pertinent to projects which are more concerned with mastering known theory are marked ‡ below.

Feedback on the draft report.

Feedback provided by supervisors must relate directly to the assessment criteria given below, so that students have an explicit understanding of what they are aiming to achieve and how they can go about improving their work. A copy of feedback is retained as part of the Supervision Record.

Class I, 70-100

- The report is well organised into sections and appendices, with appropriate introduction, conclusion, and table of contents. The notation, diagrams, graphs 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 the 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.

‡ Evidence that the candidate has mastered substantial new material at or beyond the level of 3H.

‡ Excellent choice of illustrative examples.

‡ Insightful and pertinent analysis of novel examples.

∗ 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 project data, and/or the results of other studies.

∗ Comprehensive understanding of the importance of the results in the context of the theoretical framework.

A mark in the range (85 - 100) is warranted where the candidate has strengths in all of the above areas, and especially where the candidate has presented original ideas or methods, or mastered material well beyond the level of 3H. A mark in the range (70 - 84) is warranted where the candidate displays many of the above strengths but is less well balanced in overall quality.

Class II(i), 60 - 69

- The report is quite well organised into sections and appendices, with appropriate introduction, conclusion, and table of contents. The notation is reasonably fitting, but shows minor inconsistencies. Diagrams, graphs and tables are presented well, but not outstandingly so. A reasonably sufficient bibliography is supplied and most citations are properly made. Grammar, spelling and typography show occasional minor lapses.

- Good communication of the material at its intended level of exposition. Minor weaknesses in presentation of material.

- Reasonable insight and some evidence of original thought in communicating the critical issues.

- Relative to the difficulty of the material, the candidate required some technical help from the project supervisor.

- The report is well written, logically argued and generally well structured.

- Coverage of appropriate material is sound without being excellent.

- Good coverage of relevant literature, with no major omissions.

- Good evaluation and integration of relevant literature.

‡ Evidence that the candidate has mastered substantial new material, generally at the level of 3H.

- ‡ Good choice of illustrative examples.

- ‡ Clear but prosaic analysis of novel examples, or imaginative analysis of standard examples.

- ∗ Generally correct and appropriate application of known methodology to a novel area of application.

- ∗ Adequate design for the applied aspects of the project, although possibly containing minor but retrievable errors.

- ∗ Choice of data analysis that is appropriate for the design (although less well justified than might be expected of 1st class standard), and clear presentation of results.

- ∗ Generally sound but pedestrian interpretation of results and their importance to the theoretical context.

Class II(ii), 50 - 59

- The report is adequately organised into sections and appendices, with appropriate introduction, conclusion, and table of contents. The notation chosen is suitable, but shows some major inconsistencies. Diagrams, graphs and tables are presented adequately. There are omissions from the bibliography, and some citations are missing. Grammar, spelling and typography show occasional lapses, some major.

- Acceptable communication of the material at its intended level of exposition. Some weaknesses in presentation of material.

- Occasional evidence of insight into how to communicate the critical issues.

- Relative to the difficulty of the material, the candidate required substantial technical help and guidance from the project supervisor.

- Generally competently written, although some problems exist in the logical organisation of the text and the way it is expressed.

- Adequate coverage of relevant literature, perhaps with some notable omissions.

- Provides an adequate coverage of the appropriate material, although it tends to be more descriptive than evaluative, and arguments are often disjointed.

- Acceptable evaluation and integration of relevant literature.

- ‡ Evidence that the candidate has mastered some new material, generally at the level of 3H.

- ‡ Illustrative examples are well-known, or not entirely appropriate.

- ‡ Some good analysis of examples, but with occasional errors or misconceptions.

- ∗ Attention to the applied aspects of the project is generally adequate but is marred by errors and oversights.

- ∗ Serviceable choice of data analysis, although other approaches may have been more appropriate.

- ∗ The presentation of results lacks clarity.

- ∗ Interpretation of results or other studies is adequate but limited.

Class III, 40-50

- The report is poorly organised and has only a passable introduction, conclusion and table of contents. The bibliography is inadequate and citations have been missed or are inappropriate. The notation used is barely adequate. Diagrams, graphs and tables are poorly drawn or presented. Grammar, spelling and typography show frequent lapses, some major.

- Barely adequate communication of the material at its intended level of exposition. Weak presentation of material.

- Little evidence of insight in communicating the critical issues.

- Relative to the difficulty of the material, the candidate required very substantial help and guidance from the project supervisor.

- The work is not well written and shows flaws in the structuring of logical arguments.

- Coverage of the appropriate material is weak, with insufficient information provided to support the arguments made, or conclusions drawn, within the project or essay.

- Poor coverage of relevant literature, with several major omissions.

- Poor evaluation and integration of relevant literature.

‡ Little evidence that the candidate has mastered new material at the level of 3H.

‡ Few appropriate illustrative examples.

‡ Poor analysis of examples, with frequent errors or misconceptions.

∗ Serious flaws exist in the attention to the applied aspects of the project, making it difficult for the project to meet its aims.

∗ Data analysis techniques are arbitrary or inappropriate.

∗ The results are poorly presented.

∗ Interpretations are superficial, demonstrating a weak understanding of the results and their relevance to the theoretical framework.

Fail, 0-34; Pass, 35-39

- The report is badly organised and lacks features such as an appropriate introduction, a conclusion, a table of contents, a bibliography. The notation is inadequate. Diagrams, graphs and tables are badly drawn or badly presented. There are serious lapses in grammar, spelling and typography.

- Failure to communicate the material at its intended level of exposition. Inadequate presentation of material.

- No evidence that the candidate has considered how to communicate the critical issues.

- The candidate largely ignored advice and guidance, provided by the project supervisor, that might have raised the level of achievement.

- The work is very poorly written and shows a serious inability to structure and present a logical argument.

- Coverage of appropriate material is inadequate, with little information provided relevant to the claims made, or conclusions drawn, within the project.

- Little or no attempt to cover any relevant literature.

- Little or no attempt to evaluate or integrate relevant literature.

- Serious misunderstanding of key concepts and issues.

‡ No evidence that the candidate has mastered new material at the level of 3H.

‡ Few or no appropriate illustrative examples.

‡ Poor analysis of examples, with serious errors or misconceptions.

∗ Serious flaws exist in the applied aspects of the project making it difficult or impossible for the project to meet its aims.

∗ Data analysis techniques are inappropriate and the results are presented inadequately.

∗ An inability to show how the results of the project relate to the theoretical framework.

∗ Serious misinterpretations of results.

Overall guide: The candidate has failed to produce sufficient work at the 3H level. A mark in the range (0-34) (Fail) is warranted where all aspects of the work are below the level of 3H. A mark in the range (35-39) (Pass) is warranted where there is some evidence of work at the honours level.