MMP: Structure of the Final Report

The final report and the technical outputs are worth 70% of the overall module assessment. This document describes the expectations for the final report.

You have undertaken an engineering project, a research project or, possibly, a mixture of engineering and research:

- For the purposes of this document, an engineering project is one where you will have taken a problem, identified requirements and proceeded with the design, implementation and testing. It might use a classic plan-driven approach or an agile approach. An engineering project would typically focus on software, but some projects may have a larger element of hardware.

- A research project is one where there is one, or more, research questions (hypotheses) and you have developed experiments and produced results to evaluate those questions.

Both styles of project are discussed in this document. If your project is a mixture of engineering and research, please speak to your supervisor about the best way to present your work in the final report.

There are four areas that will be assessed in the final report. These areas contribute 70% of your overall module mark.

- Problem Analysis – 15%
- Technical Work – 35%
- Critical Evaluation and Insight – 10%
- Dissertation Presentation Quality – 10%

These areas are discussed below.

Problem Analysis (15%)

This area will assess the project as described in the background, objectives and overview of the development process or research method(s).

- **Preparation**: This will assess how well you researched the background to the project topic, how well you understood what you read and how well you presented this preparation with appropriate citations and bibliographic entries. Some of the material you wrote for your Outline Project Specification may be reused here, but it would need to be more detailed.

- **Analysis**: This will assess your understanding of the problems for your project, how well you assessed alternative approaches and your justification for the approach you selected.

  There should be a clear statement of the objectives of the work or the research question, which you will evaluate at the end of the project.

  For plan-driven software development projects, it would be appropriate to include a full requirements specification as an appendix, and refer to the key issues in this section. For an agile project, the requirements should be expressed in a format appropriate to the choice of agile approach, e.g. a set of top-level user stories.

- **Process/Method**: This will assess the process you have followed to manage and organize your work. Engineering projects should talk about a development methodology, whereas a research-based project would talk

about an approach that looks at the design of a hypothesis and how that will be tested and evaluated.

This section should state what the general approach is and justify that choice. The detail showing how the approach was used should be evident from the Technical Work section (see below).

Technical Work (35%)

This area will assess the technical achievement, based on the following aspects:

- One of:
    - Design for engineering based projects. The student should explain the design for the system. There should be an indication of how the design has evolved and the decisions taken. The discussion of the design will relate to the choice of process or method.

      For example, if the student has an engineering style project, then the student should have produced a design specification. The full specification would be included as an appendix and then parts of this are discussed in the main body of the report.
    - Experiment method(s) design for research oriented projects. The student should explain the overall hypothesis being tested and justify the approach selected in the context of the research area. Within this context, the student should also describe the experiment design that has been selected and how measurements and comparisons of results are to be made.
- Implementation of the design or experiment methods. This should be discussed in the report. Discuss any difficulties encountered (such as fundamental limitations of the language or problems integrating software, or issues with the approach adopted) and how you overcame them. Describe any other significant problems you encountered and how you overcame them or whether the problems still remain;
- Quality of the technical output, including any code, tests and test data. Other issues could be considered where appropriate for the project. For example, hardware aspects may be relevant.
- User evaluation may be relevant to some projects. This would form part of the testing strategy.
- Projects, which have an identifiable client, should discuss the interactions with the client during the development.

The choice of development process might influence how this information is ordered and presented in the report. For example, a plan-driven engineering project would be expected to have produced up-front documents for design and testing. An agile engineering project would typically have iterations, so the description of design, implementation and testing might evolve over a number of iterations.

Critical Evaluation and Insight (10%)

This area assesses the quality and detail of your analysis of the strengths and weaknesses of the work that you have produced. Your analysis should also evaluate your approach to the project.

You should summarize what you have achieved in comparison with the original project aims and assess critically the work that you have carried out. How could you have improved it? Would you approach it differently if you were to start the project

over again? If you were able to continue with the work how would you extend the project?

Dissertation presentation quality (10%)

This area will assess the quality of the report, including the structure and presentation of the material, including appropriate ordering of the contents, ease of reading and ease of finding specific sections. This can include issues such as the suitability of the binding (does it hold the pages securely), the correctness and appropriateness of the language and the quality of diagrams, tables, images, screenshots, etc. Formatting of the bibliography is also taken into account.

Structuring into Report Sections

Given the above areas, here are some typical top-level structures you could use for your project reports. This top-level structure will suit the majority of projects, however it is possible to use a different structure. If you are thinking about a different structure, then it is recommended that you check your structure with your supervisor.

An engineering project

A plan driven engineering approach might use the following top-level structure:

Chapter 1: Background, Analysis and Process

Chapter 2: Design

Chapter 3: Implementation

Chapter 4: Testing

Chapter 5: Critical Evaluation

Annotated Bibliography This is a formally-structured list of the reference sources that you have used. Each item in it should correspond to one or more citation marks in the text. See separate guidance on citation and bibliography.

Appendices Extra documents that show extra work, e.g. a requirements specification and a design specification.

An agile engineering project might change Chapters 2 to 4 to show an iterative approach, rather than three distinct stages.

A research project

A research project might use the following top-level structure:

Chapter 1: Background, Analysis and Process

Chapter 2: Method

Chapter 3: Results and Conclusion

Chapter 4: Critical Evaluation

Annotated Bibliography This is a formally-structured list of the reference sources that you have used. Each item in it should correspond to one or more citation marks in the text. See separate guidance on citation and bibliography.

Appendices Extra documents that show extra work, e.g. experiment results. Speak to your supervisor about what might be relevant.

Questions?

If you have any questions about this, please speak to your supervisor or the module coordinator.

Document History

Date	User	Modification
04/04/2014	nst	Initial release version, based on information from earlier academic years.

This information is maintained by Neil Taylor, the module co-ordinator. If you have any questions about the Major/Minor Project, please contact Neil Taylor (nst@aber.ac.uk).