

PH450: First Report Instructions

The first report should demonstrate that sufficient background knowledge, understanding, and skills have been acquired before moving onto further work. It also serves as a progress and project planning report.

General Information

- The First Report is **due at Noon on Monday 11th January 2021** and is worth **20%** of the PH450 final mark.
- It should be submitted in PDF file format to MyPlace, standard late-submission policy applies.
- It will go through TurnItIn but the Second Report *will not* be checked against it. Any reproduced figures, text, quoted equations, or other materials should be correctly referenced to their original source. Students should be familiar with the University Policy, “**Student Guide to Academic Practice and Plagiarism**”, available on MyPlace.
- The main part of the report should be ~12 pages using the required format (LaTeX or Word templates). There is no strict page limit, but material *significantly beyond* 12 pages may be not considered by examiners. Reports much shorter than 12 pages may not be able to cover the material in sufficient depth either.
- It should demonstrate effective written communication skills, including the ability to concisely summarise information, concepts, and ideas at an appropriate level for the intended audience.
- The report should be aimed at readers with a general physics background but not necessarily specialist knowledge of the topic (e.g. classmates). You are not writing only for your supervisor or experts in the field.
- The First Report is not intended for the reporting of any new results, these should be presented in the Second/Final Report later in semester 2.

Report Contents

The First Report should consist of:

- Front Matter (not included in ~12 pages)
 - Abstract
 - Preface and Acknowledgements (optional)
 - Table of contents
 - Lists of Figures, Tables, Symbols and Terms (optional)
- Introduction to Topic, Motivation, General Background (~2.5 pages)
- Definition and description of project aims and the research questions to be addressed (~0.5 page)
- Review of literature and related research (~3.5 pages)
- Detailed Background (Theory/Experiment/Methodology) (~4 pages)
- Concise summary/conclusion of the literature review and project overview (~0.5 pages)
- Project plan for rest of project, Semester 2 (1 page)
- References (not included in 12 pages). Should mainly be primary sources with only a limited number of internet citations (if necessary). The choice and number of references is also a key part of the report
- Appendices (optional, not included in ~12 pages)

The actual section headings can be chosen as appropriate, as can the section lengths, structure and layout, depending on project, as long as the above *required* content is adequately represented. Appendices are for information that may be useful but not essential, e.g. some code, long calculations, or reference data. It is not to be used to circumvent the ~12 page suggested length, the main sections should be readable without the appendices. For large amounts of supplementary material, a code or data repository should be used and suitably referenced.

The report should include **some critical analysis** of previous work or existing literature (can be included in Detailed Background). This may take the form of key derivations, comparison of results, worked examples etc. as suggested by your supervisor. The idea is to **demonstrate that you understand and can put into practice** background material before progressing to more independent work that will be the focus of Semester 2 and the Second Report.

The **Project Plan** can take the form of a *clear and simple* Gantt chart together with accompanying descriptions of key tasks and milestones as indicated on timeline. It should show the progression of the key tasks and how they feed into, or depend on each other. E.g. <https://www.apm.org.uk/resources/find-a-resource/gantt-chart/> The level of detail required is not great, a 2-level break down of tasks is sufficient (High Level Tasks, Sub-Tasks) and may include tasks already performed such as the first semester activities.