

# School of Physics & Astronomy

## Summer Placements Project Report Details

**Deadline:** Friday 22<sup>nd</sup> September 2016 (23:59)

**Submission Details:** Reports must be submitted online, using the link on the Summer Placements Blackboard Pages. The report should be in PDF form and will be submitted through Turnitin. You will also need to submit the title of your project (for the certificate).

### How to Write Your Report

*The report style will be based on a typical BSc dissertation, and the guidance from TeachWeb is repeated below (Leahy 2011).*

The report should be within 4000-6000 words. Your report should be written for an ideal audience of fellow physics undergraduates who have not studied this particular topic in detail. Therefore, there should be considerably more technical detail and less basic background than in a newspaper science report or a "popular science" book; the style should be similar to a good laboratory report. A typical report might include:

1. an abstract
2. an introduction explaining the background of the task.
3. a summary of relevant results or conclusions published by other workers in this area
4. a set of calculations, graphs or diagrams that address this task
5. a justification for the particular procedures you eventually adopted
6. An independent critical analysis of the problem, including a tabular or graphical survey of the results you obtained, where appropriate
7. a conclusion evaluating the extent of your success and suggesting the direction of any further work needed

The length of the report should not exceed 20 A4 pages (including figures and references). Use of WWW references is encouraged but should not dominate the bibliography list; such references MUST contain the title, author, institution, and not just the URL.

### Tips for writing your report

If you look in a selection of journals you will find many different examples of structure, style, listing of references, and even page layout. For the purposes of this exercise you should follow the guidelines below

1. Use a common word-processing package. Line spacing should be set at 1.5 and sensible margins should be chosen. Select an easy-to-read type face (font), not something strange, and a reasonable size like 11 or 12 pt (this, 10 pt, is too small).
2. Number your pages.
3. Divide the report up into sections, each with a number, and a title or caption. Start with a short (10 lines or less) abstract and the last section will be the reference list.

4. References should be cited for (i) specific facts mentioned in the text (ii) any text directly quoted (iii) any figures copied from another source. References of all three types should be included in the same reference list.

There are two major styles of referencing sources of information (see 4.1 and 4.2); you are free to pick either of them. In both cases a reference consists of *both* a mention in the text (or figure caption) at the point where the information is used *and* an entry in the list of references at the end of your report. If you want to mention works that you have read but not used as a source for any particular point, include them in a separate bibliography; however this is unlikely to give you any extra credit, as we are looking for evidence that you have used the information that you have retrieved.

4.1 First reference style: In the text, for instance:

Jonah and Whale (1973) first reported phytoplankton blooms in the Weddel Sea. Previously, these had only been observed on local village ponds in Cheshire (Fish et al., 1946).

Notice that when the reference is explicitly mentioned in the sentence, the names are outside the brackets; but when the reference is tagged on at the end of the sentence to justify the statement made, the authors are given inside the brackets.

This results in the reference lists ordered alphabetically (by first author) and chronologically if more than one paper is by the same author(s):

Fish, A.B., Squid, C.D. and Whale, E.F. (1946) J. Low Temp. Phys. 32, 976.

Jonah, G.H. and Whale, I.J. (1973) in: *Quantum Fluids*, ed. By D.F.Brewer (North-Holland, Amsterdam) p. 146.

References should be cited in the text as:

single author: Jonah (1995)

two authors: Jonah and Whale (1973)

multiple authors: Fish et al. (1946)

4.2 Second reference style: In the text, for instance:

Jonah and Whale [1] first reported phytoplankton blooms in the Weddel Sea. Previously, these had only been observed on local village ponds in Cheshire [2].

This results in the numbered reference lists ordered as they appear in the report:

1. G. H. Jonah and I. J. Whale, in: *Quantum Fluids*, ed. By D.F.Brewer (North-Holland, Amsterdam, 1973), p.146.

2. A. B. Fish, C. D. Squid and E. F. Whale, J. Low Temp. Phys. 32, 976 (1946).

5. References in the reference list at the end should give: Author(s), year, title, journal, volume, page numbers. Use standard abbreviations for journals. If the article is in a book or conference proceedings the title of the book/conference should also be given, together with the editor(s) and publisher.

6. If you have taken significant information from a web site, then reference the web site including the date when the page was accessed. Reference the original source of the information and the author(s), if known. Even if you found the information through a search engine such as Google, give as a reference the web page actually containing the

information, not the Google search page. "Public domain" sources of information, such as Wikipedia, must still be cited if used.

**7.** Diagrams/tables may be included where applicable. Insert at appropriate places in the text, with informative figure/table legends and figure/table numbers to enable easy reference. Figures taken from publications should be good copies, and should cite the original publication in the figure legend. Each figure and table should be referred to in the text.

**8.** Equations should be used where appropriate but avoid giving long derivations. Make sure to define all symbols which you use.

**9.** Proof read your report for typographic errors, spelling, and check that the cited references and reference lists match.

The structure and style of the report are left to your discretion, but remember this is not the same as lecture notes. It should be mainly continuous flowing text, not a series of bullet points. A small number of headings can be used for the sake of clarity. The structure should be logical and easy for a non-expert to follow - develop your arguments/discussion along clear lines. Style is matter of personal choice. This should be a sound scientific article, but that does not necessarily preclude it from being entertaining and informative to a lay reader. Marks will be awarded for presentation and style, but scientific integrity will be rewarded more than wit and an amusing style.

There are many good tips on writing in the book "Students Must Write, 2nd Ed..", Robert Barrass, published by Routledge.