

Guidelines for Physics Essays (PHY315)

Spring Semester 2013-2014

Students taking module PHY315 will, in addition to sitting the Problem Solving exam papers, be required to submit an essay, as described below. Students must choose **one** topic from the accompanying list.

The essay should be written such that a fellow third-year physics student would understand, enjoy and benefit from reading it. It should be worthy of publication in an international review journal, such as in the “news and views” section of *Nature*. (It should have more technical depth than a *New Scientist* contribution.) Equations and illustrations are welcome, and should be numbered, captioned and have their source cited in the caption. Whilst it is difficult to lay down precise guidelines for essays, in general they should not include large chunks of theory or technical data but should provide a background to the topic and an indication of its importance.

The essay should be **word-processed**, and **3000 (\pm 300) words long**, excluding references and figure captions.

It should be clear, erudite, well-balanced, well-ordered, well referenced, up-to-date and relevant. You are expected to refer to a variety of technical sources in preparing your essay, and credit is given for originality of thought and originality in marshalling your sources. The majority of these should be published books or refereed journals. The accuracy of web pages is not guaranteed, so these should not be relied upon.

Students are encouraged to read widely before writing, and are seriously discouraged from merely paraphrasing sections of review articles. Students are also encouraged to talk to members of the department about their chosen topic.

It is important that the essay is your own work and so you should be aware of the University Regulations relating to this issue (See University Student Handbook). Departmental Guidelines on Plagiarism, which are more relevant to a subject such as physics, are given on a separate sheet. Sources should be properly referenced, and cited where appropriate in the text (not only for direct quotes). Citations in the text should use any of the standard conventions, numerical superscript^{1,2}, numerical reference in square brackets [1,2] or author’s name and date (Smith et al. 1999). For the first two methods, references should be listed in the order of appearance; for citation by author’s name, list references in alphabetical order. The aim of a reference citation is to allow your reader to quickly and easily locate the source of your information, including volume and page numbers for journals, page references in books and full URLs. All essays must be submitted electronically to “Turnitin”, the University licensed plagiarism detection software. You will be given details of how to do this just before the submission deadline.

The main criteria for assessment will be the coherence of the scientific argument and the extent to which the structure and content are appropriate for the subject. However marks will be deducted for poor written English – this includes spelling, syntax and punctuation. You should remember that a good essay style will contribute to the extent that your essay may be readily understood. Allowance will, of course, be made for students whose first language is not English.

Each essay will be marked by **two independent examiners** and an average taken of the awarded grades.

Dr C. N. Booth

14th March 2014