

# MPhys Y4 Directed Reading/Literature Survey

## Guidelines for Students and Supervisors

### **Introduction**

The MPhys Directed Reading/Literature Survey modules allow students to research the state of knowledge in an appropriate topic at advanced undergraduate level, under the guidance of their supervisor. The module provides opportunities for students to:

- Develop their independent learning skills
- Develop the ability to assimilate and critically analyse scientific literature
- Gain knowledge of a specialised topic, beyond material covered in lecture courses
- Develop skills in modern and traditional information retrieval techniques
- Improve their written and oral communication skills.

### **General Guidelines**

#### **Time allocation**

Students are expected to devote in the region of 7 hours per week to this half module.

#### **Contact with supervisors**

Students should make initial contact with their supervisor as soon as possible after allocation of topics. In the first meeting, the supervisor should give the student a brief overview of the topic (verbal or written), and provide them with references to appropriate source material to begin their literature survey. Following this first meeting the amount of supervisor/student contact will depend on the individuals concerned, but a meeting should take place at least once a week to discuss progress. Supervisors should assist students in deciding the scope of the topics to be covered and in helping them to strike a balance between obtaining a superficial knowledge of a large number of papers and a deep understanding of key ideas.

### **Assessment**

There are two parts to the assessment: the written report (75%) and the oral examination (25%). Assessment will be carried out by the supervisor plus one other staff member.

### **Report**

**Length:** The report should be in the region of 5000-6000 words long, and may contain an appropriate number of diagrams, graphs and tables.

**Format:** The report should consist of the following sections:

Title Page: containing title of topic, student's name, supervisor's name

Abstract (summary of report in 100-150 words)

Introduction

Main body of report: subdivided into sections if appropriate

Conclusions

Bibliography (references)

**Electronic Copy:** Students should submit both paper copies and a cdrom containing an electronic copy of their report. This version should be in word, rich text (rtf) or ascii text format. It is not essential that figures and diagrams from the report are included in the electronic copy, which will be used to check for plagiarism.

### Points to note:

- Reports should be written in standard scientific style (students should consult supervisors for advice on appropriate style).
- Students should aim to produce a well-informed, scientific discussion of the topic, rather than just presenting lists of "who did what and when". For example a statement such as "neutron scattering has provided significant information on the phonon spectra of high  $T_c$  superconductors" might be followed by a discussion on why this is a worthwhile endeavour. Why are people interested in high  $T_c$  superconductors? Why is the phonon spectrum of key importance?
- All figures should be numbered in sequence and provided with captions.
- All source material should be referenced from the text and listed in the bibliography, using standard methods adopted in scientific journals. "Primary" sources should be used wherever possible, and excessive reference to websites avoided.
- For a good indication of the overall style expected, students should look at papers from a journal such as "Reviews of Modern Physics". Many other journals contain similar review articles from time to time (eg Journal of Applied Physics). The same level of erudition is not expected in student's reports, but the style and format should be similar.

In some cases, supervisors may have other specific requirements. For example for some topics it may be appropriate to use only "primary" sources for the report. If this is the case, the supervisor's requirements should be made clear to the student from the outset. The supervisor should also inform the 2nd assessor of any such special conditions before the report is assessed.

### Plagiarism

**The report must be entirely the student's own work.** If they hand in work which

- has been written or dictated wholly or partly by another person;
- has been wholly or partly copied from the work of another person (with or without that person's knowledge or consent);
- contains quotations from the work of others which are not acknowledged; or
- consists wholly or largely of the work of others even if the sources are acknowledged;

they may find themselves facing an allegation of *plagiarism*. Depending on the degree of the offence, penalties for plagiarism range from the docking of marks to the award of a zero grade for the work and referral to a university disciplinary committee.

### Submission Deadline

Reports (2 copies plus cdrom with electronic version) must be submitted to the Departmental Office by the deadline posted on the year 4 web site. Late submissions will be penalised. The students ID number must be clearly written on the cdrom with a permanent marker pen.

### Oral Exam

The oral exam will last for about 30 minutes. It should begin with the student giving a brief (5 minutes) oral overview of the directed reading topic. The supervisor and 2nd assessor will then ask a series of questions designed to test the student's understanding of the topic and the underlying physics.

The oral exam is not meant to be a memory test. Students are encouraged to bring a copy of their report may refer to it freely during the exam.

### Assessment Criteria

A copy of the assessment form is attached as a guide to the criteria used in the assessment of the module.



## *Department of Physics*

### Year 4: Directed reading assessment

Student:

Project Title:

Supervisor:

Date:

Assessor:

<b>Project Report (75%)</b>	<b>Supervisor's Mark</b>	<b>Assessor's Mark</b>	<b>Average Mark</b>
<p>(f) <b>Report content (50%)</b></p> <p>Demonstration of understanding (quantitative where appropriate), evidence of good use of source material, coherence of scientific argument/analysis.</p>			
<p>(g) <b>Report presentation (25%)</b></p> <p>Format, organisation clarity of language and structure, conciseness, freedom from errors in grammar/spelling/punctuation, scientific style, clarity of diagrams and figures.</p>			
<b>Oral Examination (25%)</b>			
<p>(h) <b>Oral examination (25%)</b></p> <p>Quality of 5-minute overview, understanding of report topic and background physics</p>			
<b>Total (%)</b>			
<b>Overall Grade (1-16)</b> <b>(use standard conversion)</b>			

## **MPHYS Directed Reading/Literature Survey**

Please choose a topic from the lists provided. When you have decided which topics you are interested in, it is your responsibility to discuss them further with the supervisor/s concerned, before indicating your preferences on the form below.

To assist me in allocating topics please indicate your preference on this form and return it to the physics department office by **the deadline posted on the fourth year web site**.

(**Note:** If no choice is registered topics will be allocated randomly.)

### **TOPIC CHOICE**

**Name:**

**Email address:**

**ORDER OF PREFERENCE:** Please use the numbers allocated and, to avoid confusion, a short title.  
PLEASE DO NOT CHOOSE MORE THAN ONE TITLE FROM A SINGLE SUPERVISOR

**1st Choice:**

**2nd Choice:**

**3rd Choice:**

**N.B. All topics offered by individual supervisors cannot always be allocated concurrently**

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