



University
of Glasgow | School of Physics
& Astronomy



PHYS4007 General Physics Workshop

Course Information Guide

1 Course Details

PHYS4007 General Physics Workshop is a level 4 Physics honours course. It is compulsory for all B.Sc. students in Physics, Theoretical Physics, Physics with Astrophysics and all M.Sci. students. It is an elective course for B.Sc. joint honours students including Chemical Physics, exchange students and 3rd year designated degree B.Sc. students. It comprises 2 workshops of 3 hours each in semester one followed by a Class Exam in the December exam period. In semester 2, there is an additional 3 hour workshop, where detailed feedback will be provided on the Class Exam.

Lecturer: Dr Eric Yao
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Recommended Text: All the physics undergraduate texts recommended for core courses! Furthermore in the introductory session advice will be given on the type of general reading and materials which can prove useful.

Course slides and sample problems are made available on Moodle.

2 Assessment

25% of the final mark will be assigned to the Class Exam in December. The remaining 75% is assessed via an examination in the April/May diet. This course provides 10 H-level credits.

3 Required Knowledge

Due to the nature of the course, students will be expected to have a good knowledge of undergraduate physics, in all core areas. Students will not be expected to be familiar with elective material, but any compulsory material may be used in problem solving.

4 Aims and Intended Learning Outcomes

In an AI augmented landscape, critical thinking and communication are two of the most important, valuable, and transferable skills that Physics students develop during their undergraduate degree careers. This course aims to provide opportunities for students to develop their critical assessment and communication skills, in the context of working in small groups. We further aim to develop students' ability to study and revise effectively and to reinforce their individual responsibility for their own learning. The course aims to provide students with training in how to answer general physics questions which draw upon their broad knowledge and experience of the subject.

By the end of the course, students will be able to: carry out effective self-study and general revision of their Physics courses, in order to answer general physics questions and based on their contents; carry out self and peer-assessment of their performance when attempting example questions; work effectively within a small group, sharing ideas, organising & prioritising results and delivering short oral presentations.

5 Course Outline

In the first workshop, an initial introduction to approaching general physics questions will be given. It will be demonstrated how to tackle these questions with some detailed examples.

In the remainder of the first workshop and the second, students will be given the opportunity to attempt general questions in small groups and individually. For the group question, one member of the group will present their solution of their problem to the class. For the individual questions, students will mark the solutions of their fellow students, providing insight into how marks are awarded.

The third workshop will be in the second semester, after the Class Exam in December. The exam scripts will be (temporarily) returned so that students can see where they did well and where they can further improve. Sample solutions of the exam questions will be presented, and students will have the opportunity to discuss.

There will be online continuous assessment exercises set over the course of the year. These consist of engagement with course material posted on the Perusall platform (details will be communicated to the class at the start of term) and "timed essay + peer assessment" assignments set within the course moodle page.