

# PHYS 101 – 23SU

## ENGINEERING PHYSICS A: MECHANICS, WAVES AND THERMAL PHYSICS

**PHYS101** is a 15-point course that meets the Physics requirement for Engineering Intermediate, and is required to advance in Physics and Astronomy.

**Please note that this version of the course outline includes important changes to the one that was previously available:**

1. The official start date for the course is now the 4th of December, however you are free to begin studying immediately.
2. Assessment includes new Quizzes on Learn being assessed.
3. 27/11/23 - Term test dates have been updated, HW dates have been consequently updated as well – please put the new times in your diary NOW.
4. The exam date has been confirmed and it will require you to be on campus to complete.

### COURSE INFORMATION

**This summer course is available ONLY to students who have done PHYS101 previously**, and who have previously passed the lab component of the course. Students who wish to attempt the course for the third time must seek permission from the first year coordinator, [mike.reid@canterbury.ac.nz](mailto:mike.reid@canterbury.ac.nz).

The summer course will operate similarly to the S2 version of the course, and the course information for that course is available on Learn as a reference. This document is much briefer and focuses only on the differences in the way the course will be done over the summer.

The course officially starts on 1 December 2023 and finishes 9 February 2024. Course content will be available from 13 November, but very few students will be enrolled at that point as they will be waiting for their S2 grades, which are released on 1 December. **Students who want to enrol in this course must do so promptly on 1 December and begin working on the course material immediately.**

**Lab exemption:** It is your responsibility to ensure you have the required lab exemption. **You must contact Clifford Franklin <[cliff.franklin@canterbury.ac.nz](mailto:cliff.franklin@canterbury.ac.nz)> to check you have an exemption.**

### QUERIES, QUESTIONS, ISSUES

If you have checked the course outline **and** LEARN and you **still** have a query, you can email your question to

[physics101@canterbury.ac.nz](mailto:physics101@canterbury.ac.nz)

## CLASSES

There will be no formal lectures. Instead, you are expected to watch the lecture recordings provided via Echo. They are in the “2023 Summer Recordings” on Echo. Links are also provided in each appropriate section on Learn.



Videos of the lecture demonstrations are available in the “Dems” folder.

Note that both folders are accessed by clicking on the “>” symbol.

Drop-in classes will be held twice a week on zoom. Check Learn for times and a link. You may attend as many as you wish.

### Tutor and Course Supervision

The Tutor, who will run all aspects of the course, is **Lachlan Champion**. The course supervisor is Simon Brown. You can contact them through the email address above.



### Homework

You are free to do the assignments in your own time, but each section of the course needs to be completed before the corresponding test. To ensure that you have time to review the solutions **the due date for the three sets of assignments will be**

- 15 December 2023 for Thermodynamics,
- 24 January 2024 for Mechanics,
- 7 February 2024 for Electromagnetism.

All homework needs to be uploaded using the links provided on Learn, **to access these you will need to complete the quizzes** in that section (see below). **Ignore** any comments on the tutorial problem sheets that say only some of the questions need to be done – **you need to do all the problems.**

Honest attempts will be graded as follows:

0. No or little effort
1. Some effort / working partially complete / problem partially solved
2. Significant effort / working mostly complete / problem mostly solved

## Assessment

Satisfactory performance in the homework, tests and exam are required for a passing grade in this course.

- 5% Quizzes. See below.
  
- 15% Homework. Marks will be assigned for 'honest attempts' at the **full** set of the assigned tutorial questions. **Ignore** any comments on the tutorial problem sheets that say only some of the questions need to be done – **you need to do all the problems**. The maximum grade can be achieved for completing 10 out of 12 sets of homework.
  
- 30% **Online** Term Tests (15% each)  
Test A will cover the thermodynamics topic, on Wednesday 10 January at 1830-1930.  
Test B will cover the mechanics topic on Friday 26 January at 1830-1930.  
  
Online tests will be **open book** and will be done via Learn. Because they are open book, they will be **significantly different to** the usual multichoice tests in past (e.g. the ones in PHYS101-23S2).
  
- 50% Final examination. This will cover the **entire** course and will be completed in person on campus. So, you **must** be in Christchurch to attend the exam which is on the 9 February at 1430.

**Note that failure to obtain a mark of at least 40% in the exam will result in a final grade no higher than an R.**

## Quizzes

For the summer version of the course there will be Quizzes worth a total of 5% of your course grade. These questions will be like the Slido question in the previous version of the course you did. By completing them you will help to solidify your knowledge and help practice solving problems that are used in this course.

There is one Quiz for each Lecture. You must access the quiz via the link in the relevant Section on Learn. If you do not do the Quizzes you will not be able to access the assignment each week.

## Tutorials and labs

Will not be run over the summer.