UNIVERSITY OF CAPE TOWN
DEPARTMENT OF PHYSICS
PHY1031F
2026 COURSE INFORMATION SHEET

INTRODUCTION

PHY1031F and PHY1032S are two semesterised half-courses taken by students who do not plan to continue beyond the first year in Physics. These courses are mainly for students majoring in the Chemical, Molecular and Cellular Sciences and in the Biological, Earth and Environmental Sciences who need Physics as an auxiliary subject. Geomatics students typically complete these courses in their 2nd year.

PHY1031F/1032S should **not** be taken by students who wish to continue with Physics. Students who expect to continue with Physics should register for PHY1004W in their first year.

LECTURES

Lectures are held daily in the third period (10h00 – 10h45) in Lecture Theatre 3A of the RW James Building, starting on Monday, 16 February.

The lecturers for the course are Dr Spencer WHEATON (**COURSE CONVENER**) (4T4 RW James), Dr Kevin BARENDS (5.06 RW James) and Dr Daphney BUCHER (4.04 RW James). Consultation times with the lecturers will be advertised on Amathuba.

COURSE STRUCTURE

Section	*Lectures*	*Lecturers*
Mechanics (M) and Properties of Matter (PM)	43	Dr S.M. Wheaton and Dr K. Barends
Vibrations and Waves (VW)	14	Dr D. Bucher

(refer to the detailed course schedule)

Mechanics:	*vectors, kinematics, forces, dynamics, momentum, impulse, work, energy, power, collisions, rotation, rotational dynamics, torque, angular momentum, static equilibrium, gravitation*
Properties of Matter:	*hydrostatics, hydrodynamics*
Vibrations & Waves:	*simple harmonic motion, damped oscillations, forced oscillations, resonance, travelling waves, superposition, standing waves, sound waves, sound intensity, Doppler effect*

TEXTBOOK

The prescribed textbook for the course is Knight, Jones & Field: *College Physics* (Pearson). All registered students will have access to a digital version of the text via the Pearson MyLab and Mastering Physics learning platform. To gain access to this resource students should follow the link on Amathuba under Pearson.

LABORATORY/TUTORIAL SESSIONS

Students are to allocate either Monday OR Wednesday OR Thursday afternoons (14h00 to 17h00) to PHY1031F practical / tutorial sessions (e.g., students choosing Wednesday should be free every Wednesday afternoon for PHY1031F practical / tutorial activities).

More details will follow at the first meeting of class on 16 February (e.g., how to sign up for an afternoon).

All questions regarding the laboratory organisation should be directed to Mr Mark Christians, the Lab Attendant, in the first instance. His office is in the Physics I Lab behind the large chalkboard.

Students who have previously attended PHY1031F (or an equivalent UCT Physics course) may apply for exemption from the practical component of the course – **note that exemption will not be given for the tutorial component**. Exemption is NOT granted automatically. Students wishing to apply for exemption must complete a lab exemption form (available on Amathuba within the 'Course Administration' unit) and submit it to Mr Mark Christians (mark.christians@uct.ac.za) within the first two weeks of term.

Tutorials will alternate with laboratory (or practical) activities. During tutorial sessions, students will tackle unseen problems with assistance from tutors.

Afternoon laboratory / tutorial sessions will start in the first week of term with a tutorial (refer to the detailed course schedule)

WEEKLY PROBLEM SETS

Each Friday a set of questions will be issued on the Mastering Physics platform (more details to follow). Students are to work through all the problems and submit their answers on the platform by the end of the next week. (Students may consult with each other and approach the course tutors for help, if necessary.)

Note: These weekly problem sets and the tutorials are a good indicator of the type and standard of questions which can be expected in tests and exams.

COURSE TUTORS

The course tutors, Moses Mlangeni and Maya Munoz, will assist students with the course material during advertised consultation times and will produce solutions to the Weekly Problem Sets.

LECTURE RECORDINGS

All lectures will be recorded and will be available for viewing and download on the PHY1031F Amathuba site. Watching a recording is no substitute for attending a lecture live, but recordings are useful in giving students the opportunity to rewatch a portion of the lecture that they battled with. More details will follow.

CONTINUITY OF TEACHING

If lectures are disrupted and/or access to campus is restricted, teaching and learning will continue online. All lectures will be recorded as well. The course convener will make announcements about changes to the mode or timing of any activities associated with the course (lectures, pracs, tuts, tests, etc.). Students without Internet access at home should take note of eduroam locations (https://eduroam.ac.za/) and other places where free Wifi is available.

CLASS TESTS

The dates of the two class tests are **17 March** and **28 April**. The start times and venues will be announced in due course. The date of the final examination will be published later.

PLAGIARISM DECLARATION

Every student needs to read the section on 'Academic Integrity' (under the 'Welcome to PHY1031F' unit on Amathuba) which covers the topic of plagiarism. They should then complete the plagiarism declaration and honour pledge, stating that they will not plagiarise and will honestly complete all assignments within the guidelines set for each activity. The declaration and honour pledge are available as an Amathuba Quiz and must be completed before the end of the first week.

USE OF ARTIFICIAL INTELLIGENCE

The UCT Faculty of Science recognises that some AI tools may aid learning, and that developing AI literacy is essential. Therefore, the use of generative AI tools in this course may be permitted for specific assessments, when this is determined to support the course learning goals.

Science students are required to develop critical thinking, problem solving, data analysis, scientific writing and other core academic skills independently of AI. Inappropriate use of AI may undermine learning in this regard and lead to academic dishonesty. Students must be able to defend any work that they submit.

Assessments in which AI tools are permitted will be clearly identified by the lecturer-in-charge with specific details of allowed AI usage included in the assessment instructions. A student that chooses to use AI tools for any part of such an assessment (from brainstorming to text editing), must include a clear declaration with their submission. This should state:

> "I have used [name of AI tool], as permitted by the lecturer, for the purpose of [brief description of use]. I take full responsibility for the final content of this submission."

Failure to properly declare AI tools is considered a violation of the University of Cape Town's rules on academic conduct and plagiarism, as provided in Handbook 3: General Rules and Policies. Students unsure of what constitutes an AI tool, must check with the course convener.

Students suspected of academic misconduct related to the misuse of AI tools will be subject to the disciplinary process outlined in UCT Handbook 3.

ATTENDANCE AND EXEMPTIONS

Attendance at practicals, tutorials, tests and examinations is compulsory. All students are expected to attend all practical laboratories for the course, and complete all laboratory reports, other homework assignments, and laboratory tests (where applicable), and attend all whiteboard tutorials. If you are ill and miss any grade-carrying activity, then a medical certificate from a registered medical practitioner needs to be emailed to the course convener within 2 days of returning to health, and a 'Missed Activity Excuse Form' will need to be completed (available on the PHY1031F Amathuba site within the 'Course Administration' unit). Students missing a test due to illness will be asked by the course convener to write a make-up test within a few days. Plans will also be made to hand in missed homework, tutorials or other assignments. Exceptions are only granted in very rare circumstances.

An application for exemption from laboratory activities for students who are repeating the course must be made using the special form for this purpose (available on the PHY1031F Amathuba site) and presented to Mr Christians in the first-year laboratory within the first two weeks of term.

PLANNED SHORT ABSENCE

If a student wishes to be granted an exemption or extension for a course requirement associated with a planned (future) short absence from the course, then there is a 'Short Leave Application' form to complete (available on the course Amathuba site within the 'Course Administration' unit). This form needs to be emailed to the course convener at least 3 working days prior to the period in question. Irreversible plans (such as flight bookings) must not be made before approval of leave is granted. Completion of the form is not required for medical certificates obtained on the day of unplanned illness.

PHY1031F COURSE ASSESSMENT

	Component	*% of Final Mark*
(1)	Class tests	24 %
(2)	Afternoon laboratory record	10 %
(3)	Weekly problem sets	6 %
(4)	Laboratory practical test	10 %
(5)	Final examination	50 %

The pass mark is 50 % with no sub-minima in any of the separate assessments, but the lab test must be written. Course grades will be accessible through Amathuba.

DP CERTIFICATES

A student will be regarded as having "duly performed" the work of the course, and thus qualify to write the final examination, if they have met the DP requirements for this course. DP certificates may be withheld from students who fail to meet these minimum requirements. Students who are not awarded DP certificates will not be permitted to write the final examination. The DP list will be published no later than one calendar week before the last teaching day of the course, and all grades recorded on that day will be used to consider the DP status of each student. Grades recorded after this date will be used in cases of appeal when a DP is not awarded. An appeal against a DP not being awarded is first made to the course convener, and thereafter potentially to the Head of Department (by email).

The following are the **DP requirements for this course:**

1. A minimum of 35 % overall for the coursework component of the course (as determined one week before the last teaching day of the course).
2. Attendance at all class tests and the lab test. Students missing a test for medical reasons will be required to write a make-up within three days of returning to classes, in consultation with the course convener.
3. A minimum of 50 % for the laboratory component of the course.

COURSE ADMINISTRATION

1.	*Amathuba & Email:* All notices and solutions will be posted on the PHY1031F Amathuba site. Please ensure that you check your UCT email account regularly, or else set up an auto-forward to your preferred email account.
2.	*Course Marks:* All marks can be viewed on Amathuba Grades.
3.	*Formula Sheets:* Formula sheets will be provided for tests and the exam.

REASSESSMENT

The Physics Department will reassess students who achieve an overall final mark of between (and including) 45 % and 49 % for PHY1031F, i.e., students who are graded with an S after the mid-year final exam (e.g., 47 FS).

The mark obtained in the supplementary examination will replace the mark scored in the mid-year final examination and will then be averaged with the class record to determine the final aggregate after the supplementary.

Students whose final aggregate after the supplementary is 50 % or higher will be graded as 50 UP SP – a so-called "unclassified" pass in the subject. Those students whose final aggregate after the supplementary is below 50 % will fail the course (such a student with, e.g., a result of 47 FS before the supplementary will have their final result after the supplementary recorded as 47 SF).

The supplementary and deferred examinations for this course will be written in the final week of the mid-year vacation.

PHY1031F COURSE CONVENER

Dr Spencer Wheaton

Room 4T4 RW James Building

13 February 2026