

PHY1013F

Course Information Sheet

February 13, 2022

Course Description:

PHY1013F is the second semester introductory physics course for engineers taught in the first semester of the academic year. In this third year of the Covid-19 pandemic, the course will operate in a Physical Distanced Learning, low density Approach. Engagement with written material, online videos, and online as well as the in person activities will be a crucial component of the learning process during this strange and difficult time.

Entrance Requirements:

Consult the engineering handbook.

Course Outline:

The material is slightly reduced from the handbook description but the core is still the same, simple harmonic motion and vibration, electric charge, field, potential energy and potential, capacitance, current and resistance, circuits including multi-loops, magnetic field force, Faraday's law, inductors.

Logistics:

Textbook: Knight *Physics for Scientists and Engineers: A Strategic Approach*, 4th Ed.

Website: <http://vula.uct.ac.za/>

Other potential useful textbooks include:

- *Fundamentals of Physics* – Halliday, Resnick and Walker (Wiley)
- *University Physics* – Young and Freedman, (Addison-Wesley)
- *Physics for Scientists and Engineers* – Serway and Jewett, (Brooks Cole)

Marks:

Lab Reports:	7.5%
Lab Exam:	7.5%
Weekly Vula Quizzes	10%
2 Class Tests:	25%
Exam	50%

Code of Honour:

You will be required to read, accept the Faculty of Science Code of Honour. To do this every student must complete the ‘Code of Honour Pledge’ quiz under Tests & Quizzes on the course Vula site. This Pledge is mandatory.

Lectures:

Lecture videos and associated learning material is uploaded to the Vula site under the appropriate Lessons tab.

Weekly Vula Quizzes:

- Students are to work through all the problems (and are strongly encouraged to attempt the extra, textbook problems listed). Students may consult with each other and should approach the course tutor for help if necessary.
- Before the deadline, students must complete and submit the homework online in Vula (under Tests & Quizzes).
- Once you click “Begin Assessment,” you’ll have unlimited opportunities to complete and submit the homework. **If, for ANY reason, at the deadline you have not submitted, Vula will automatically submit your homework, regardless of whether you have answered all the questions. This submission will be graded.**

Marks thus obtained for these weekly quizzes will contribute 10% towards the final course mark.

Test Schedule:

Test 1: Tuesday, March 15, 2022 at 18h00

Test 2: Tuesday, April 26, 2022 at 18h00

Examinations:

The final exam will be held during the usual June examination period.

Laboratory:

There will be a full complement of lab activities for PHY1013F, including a lab test. These lab activities will be in a hybrid ‘do at home’ as well as in person format. The PHY1013F lab calendar can be found on Vula under Resources/Admin. You may ask for exemption for any lab activities (labs, lab reports, and lab test) you’ve already participated in. You may request an exemption by sending a filled out ‘PHY lab exemption application form.pdf’ found on Vula under Resources/Admin to Mr. Mark Christians (Mark.Christians@uct.ac.za).

Medical certificates:

Participation in all practicals, weekly quizzes, and tests is mandatory. If you are ill and miss any grade-carrying activity, then a medical certificate from a *registered medical practitioner* needs to be presented to Ms. Jill Patel (jill.patel@uct.ac.za) within 2 days of returning to classes, and a short form—found under Vula/Admin—will need to be completed. A medical certificate must include the

date(s) for which the medical professional found in their professional opinion that the student was unfit to attend university activities. 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. Exceptions are only granted in very rare circumstances. Exemptions from laboratory activities are handled by Mr. Mark Christians (Mark.Christians@uct.ac.za) and not the overall course convener.

Note that for mental health, EBE has a dedicated student counsellor, Nazeema Ahmed, who is a clinical psychologist. She can be contacted at 021 650 2413 or by email nazeema.ahmed@uct.ac.za.

Short leave from the course:

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 form to complete (available on the course Vula site). This form needs to be submitted to Ms. Jill Patel (jill.patel@uct.ac.za) 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 (see section above).

DP:

To be awarded a Duly Performed (DP) and be invited to the final examination, students must:

- Receive a class record of at least 35% (based on all grades available at the time of publishing DP lists)
- Participate in all class tests,
- Complete and submitted all lab activities, with an overall average of at least 50%,
- Submit at least 90% of the online quizzes

Regrades and Reassessment:

Regrade requests must be made within one week of the posting of marks or solutions, whichever comes first.

There are no reassessments.

Communication:

You may wish to consider the following valuable resources when constructing formal communications between yourself and the hard-working academic team assigned to this course:

<https://www.insidehighered.com/views/2015/04/16/advice-students-so-they-dont-sound-silly-emails-essay>

<https://medium.com/@lportwoodstacer/how-to-email-your-professor-without-being-annoying-af-cf64ae0e4087>

Convenor:

A/Prof. W. A. Horowitz

wa.horowitz@gmail.com

R. W. James, Room 4.06

Tutor:

TBD