

# General Physics II

Spring 2021

**Lecturer:** Pei-Ming Ho 賀培銘 (office: R812, phone: 3366-5192, email: pmho@phys.ntu.edu.tw)

**TA:** 張哲維 (r09222063@ntu.edu.tw), 鄭篤容 (r09222014@ntu.edu.tw), TA for homework.  
陳文翊 (r09222054@ntu.edu.tw) TA for simulation in Python.

**Lecture Hours:** Tue & Thur, 10:20 am – 12:10 pm      **Classroom:** R111

**Office Hours:** Pei-Ming: Mon. 11:10 am – 12:00 noon & Thur. 12:10 – 2:10 pm @R812  
(or appointments by email).

**Course Webpage @ NTU COOL:** <https://cool.ntu.edu.tw/courses/13353>

**Textbook:** Benson: “*University Physics*” 3rd Revised Edition (2019)

**Reference:** Resnick, Halliday, Krane: “*Physics*” (Wiley).  
Katz: “*Physics for Scientists and Engineers* ” vol.1& 2 (Cengage).  
“*Feynman’s lectures on physics*” <https://www.feynmanlectures.caltech.edu/>  
NTU General Physics webpage: <https://www.phys.ntu.edu.tw/course/classA2.aspx>

**Grades:** homework (20%) + simulation (20%) + mid-term (30%) + final (30%).  
Numerical grades are transformed to letter grades in a way depending on the distribution.

**Lecture Notes:** Lecture notes are provided as supplementary reading materials.  
It is not a substitute of the textbook.

**Homework:** Late submission: 80% within 3 days after due date; 0% afterwards.  
*Check your grades on NTU COOL frequently.*

**Exercises:** Work on as many exercises as possible, in addition to homework assignments.

**Syllabus:** (Only suggestive; due dates for simulation to be announced on CEIBA.)

<u>Week</u>	<u>Date</u>	<u>Topic</u>
1	02/15, 02/17	Electrostatics, Electric Field
2	02/22, 03/24	Gauss’ Law
3	03/01, 03/03	Electric Potential, Capacitor, Dielectrics
4	03/08, 03/10	Current and Resistance, Direct Current Circuits (HW1 due on 03/10)
5	03/15, 03/17	Magnetic Field, Sources of Magnetic Field
6	03/22, 03/24	Electromagnetic Induction
7	03/29, 03/31	Inductance, Magnetic Materials
8	04/05, 04/07	04/05 Spring Break; 04/07 Mid-term exam (HW2 due on 04/07)
9	04/12, 04/14	Alternating Current Circuits
10	04/19, 04/21	Maxwell’s Equations, Electromagnetic Waves
11	04/26, 04/28	Wave Optics & Geometric Optics
12	05/03, 05/05	Special Relativity (HW3 due on 05/05.)
13	05/10, 05/12	Special Relativity, General Relativity
14	05/17, 05/19	Quantum Physics I
15	05/24, 05/26	Quantum Physics II
16	05/31, 06/02	05/31 No Class; 06/02 Final Exam (HW4 due on 06/02.)
17 & 18		自主學習