

96 下學期普通物理 A 二-課程大綱

課程說明

- 本學期講授電學、磁學、電磁波、物理光學及量子物理等內容。
- 本學期有二次期中考及一次期末考，各組統一命題，於上課時間考試。考試地點如與上課教室不同時另行通知。應屆畢業生期末考時間不提前。
- 有不定時舉行之隨堂小考。
- 上課時不可使用電話手機。
- 考試以英文命題，學生須熟悉每章最後「Review & Summary」內的英文物理名詞，考題內有較難之詞句會加註中文，但如出現「Review & Summary」及勾選習題之詞句則不加註中文，亦不予解釋。
- 考試時不可使用字典、計算器及可儲存公式之電子產品，不可攜帶任何紙張。

指定用書

Fundamentals of Physics (Extended Edition) by Halliday, Resnick, and Walker. 本書最新版本是第八版。選修同學如已有第六或第七版，可以不必購買第八版。

參考書籍：

1. R.A. Serway and J.W. Jewett, Jr., Principles of Physics (6-th Edition), 2004
2. H. Benson, University Physics (Revised Edition), 1995

教學方式：

- 課堂講授及演習，課堂講授每週上四節課（星期二、四，10:10-12:00）。
- 演習以習題講解為主，由助教負責，時間為每星期二、三晚上七時至九時，在物理館 002 教室舉行（備用教室物理館 504 室），學生自行選擇適合時間出席。習題講解結束後的時間，同學可自由詢問課業相關問題，由助教解答。演習自 2 月 26 日（星期二）開始。統一考試之次星期，無演習課。

教學進度

- 本進度僅供參考，各組教師可自行調整，但進度要能配合統一考試。
- 本學期自 2 月 19 日開始上課至 6 月 13 日停課，共十七週，每週上課二次（每次二節），扣除兩個假日及兩次期中考，上課次數總共 30 次。各次上課內容如下（多餘次數供教師彈性運用）：

週次	次數	第八版	第七版	第六版
1	1.	CH 21, Sec. 1 – 6	CH 21, Sec. 1 – 6	CH 22
	2.	Ch 22, Sec. 1 – 7	Ch 22, Sec. 1 – 7	
2	3.	CH 22, Sec. 8 – 9 CH 23, Sec 1 – 4	CH 22, Sec. 8 – 9 CH 23, Sec 1 – 4	CH 23 and CH 24
	4.	CH 23, Sec. 5 – 9	CH 23, Sec. 5 – 9	
3	5.	CH 24, Sec. 1 – 8	CH 24, Sec. 1 – 8	CH 25 and CH 26
	6.	CH 24, Sec. 9 – 12 CH 25, Sec. 1 – 3	CH 24, Sec. 9 – 12 CH 25, Sec. 1 – 3	
4	7.	CH 25, Sec. 4 – 8	CH 25, Sec. 4 – 8	

5	8.	CH 26, Sec. 1 – 9	CH 26, Sec. 1 – 9	CH 27
	9.	CH 27, Sec. 1 – 9	CH 27, Sec. 1 – 9	CH 28
6	10.	CH 28, Sec. 1 – 5	CH 28, Sec. 1 – 5	CH 29
(6 週)第一次期中考(3 月 27 日, 星期四): CH 21 – CH 27				
7	11.	CH 28, Sec. 6 – 10	CH 28, Sec. 6 – 10	CH 29
8	12.	CH 29, Sec. 1 – 6	CH 29, Sec. 1 – 7	CH 30
	13.	CH 30, Sec. 1 – 7	CH 30, Sec. 1 – 7	CH 31
9	14.	CH 30, Sec. 8 – 12	CH 30, Sec. 8 – 12	CH 33
	15.	CH 31, Sec. 1 – 7	CH 31, Sec. 1 – 7	
10	16.	CH 31, Sec. 8 – 11	CH 31, Sec. 8 – 11	CH 32
	17.	CH 32, Sec. 1 – 5	CH 32, Sec. 1 – 5	
11	18.	CH 32, Sec 6 – 11	CH 32, Sec 6 – 11	CH 34
	19.	CH 33, Sec.1 – 5	CH 33, Sec.1 – 5	
12	20.	CH 33, Sec. 6 – 10	CH 33, Sec. 6 – 10	
(12 週)第二次期中考(5 月 8 日, 星期四), CH 28 – CH 32				
13	21.	CH 35, Sec. 1 – 5	CH 35, Sec. 1 – 5	CH 36
	22.	CH 35, Sec. 6 – 8	CH 35, Sec. 6 – 8	
14	23.	CH 36, Sec. 1 – 6	CH 36, Sec. 1 – 6	CH 37
	24.	CH 36, Sec. 7 – 10	CH 36, Sec. 7 – 10	
15	25.	CH 38, Sec. 1 – 5	CH 38, Sec. 1 – 5	CH 39
	26.	CH 38, Sec. 6 – 9	CH 38, Sec. 6 – 9	
16	27.	CH 39, Sec. 1 – 6	CH 39, Sec. 1 – 6	CH 40
	28.	CH 39, Sec. 7 – 9	CH 39, Sec. 7 – 9	
(18 週)期末考(6 月 17 日, 星期二): CH 33, CH 35, CH 36, CH 38, CH 39				

成績計算

- 二次期中考及期末考各占 25%，平時考核 25%。
- 期中考及期末考之成績，如各班均偏低，經各組授課教師同意，可酌予調高。
- 平時考核包含小考，上課表現，各組教師自行評分。
- 學期成績不及格者須重修，不能補考。
- 考試未請假者，該次以零分計。

習題

- 習題不必繳交，但考試內容會包含很多勾選的習題。
- 習題號後有 rev 代表題目有作修改(revised)。
- 注意：使用舊版(第六與第七版)課本同學請參考下列之新舊版習題對照表。

第八版	第七版	第六版
21-7	21-9	22-7 rev
21-8	21-6	22-14 rev
21-17	21-15	22-12 rev
21-19	21-17	22-9 rev
21-54	21-66	22-15 rev
22-9	22-11	23-13 rev
22-21	22-21	23-17

22-32	22-29	23-24 rev
22-33	22-55	23-25
22-46	22-40	23-36
22-53	22-47	23-42
22-59	22-87	23-47
22-76	22-84	23-19
22-86	22-86	23-43
23-11	23-13	24-7 rev

23-13	23-11	24-11 rev
23-27	23-27	24-19 rev
23-32	23-30	24-22
23-39	23-37	24-31 rev
23-43	23-41	24-33 rev
23-49	23-47	24-45 rev
23-51	23-49	24-43 rev
23-53	23-53	24-47
23-55	23-51	24-41 rev
23-74	23-85	24-25
23-77	23-72	24-46
24-19	24-17	25-17
24-33	24-29	25-29 rev
24-40	24-36	25-34 rev
24-51	24-93	25-45
24-65	24-55	25-53 rev
24-66	24-58	25-56
24-67	24-57	25-54
24-88	24-94	25-41
24-92	24-100	25-9 rev
24-93	24-101	25-11
24-101	24-114	25-33
25-12	25-12	26-16 rev
25-15	25-13	26-17
25-17	25-15	26-18 rev
25-26	25-21	26-21 rev
25-35	25-31	26-29 rev
25-45	25-39	26-39
25-50	25-44	26-42 rev
25-53	25-47	26-45 rev
25-68	25-74	26-31
26-2	26-3	27-3
26-13	26-11	27-10 rev
26-23	26-23	27-21
26-25	26-25	27-25
26-35	26-33	27-29 rev
26-53	26-47	No
26-55	26-55	27-9
26-62	26-56	27-42
26-63	26-63	No
27-20	27-13	28-15 rev
27-37	27-27	28-33 rev
27-41	27-31	28-29 rev
27-43	27-33	28-31 rev
27-48	27-36	28-32 rev
27-52	27-40	28-38 rev
27-64	27-51	28-53
27-65	27-53	28-55 rev

27-66	27-52	28-52
27-74	27-68	28-17
27-95	27-67	28-50
28-14	28-11	29-14
28-29	28-23	29-27 rev
28-38	28-30	29-32 rev
28-45	28-37	29-37 rev
28-47	28-39	29-39 rev
28-48	28-40	29-40 rev
28-53	28-45	29-47
28-61	28-53	29-55
28-74	28-82	29-21
28-80	28-81	29-13
28-81	28-85	29-5 rev
29-5	29-5	30-9 rev
29-21	29-19	30-13 rev
29-31	29-23	30-19 rev
29-39	29-31	30-27 rev
29-47	29-39	30-35 rev
29-55	29-44	30-46
29-60	29-51	30-56 rev
29-61	29-52	30-54 rev
29-65	29-61	30-37 rev
29-79	29-89	30-39
29-90	29-86	30-28
30-5	30-5	31-7
30-26	30-24	31-24 rev
30-27	30-25	31-23
30-35	30-33	31-31
30-39	30-37	31-34
30-43	30-41	31-39 rev
30-48	30-46	31-44 rev
30-56	30-52	31-53 rev
30-59	30-57	31-55 rev
30-65	30-62	31-60
30-71	30-67	31-67
30-75	30-71	31-71
30-77	30-73	31-75 rev
31-11	31-13	33-13
31-15	31-15	33-15 rev
31-19	31-17	33-17
31-24	31-26	33-27
31-39	31-39	33-39 rev
31-45	31-45	33-45 rev
31-49	31-47	33-47
31-57	31-55	33-57 rev
31-58	31-58	33-56 rev
31-61	31-59	33-61 rev

31-88	31-64	33-65 rev
32-3	32-3	32-3 rev
32-7	32-7	32-28
32-17	32-17	32-33
32-18	32-16	32-34 rev
32-20	32-18	32-38 rev
32-21	32-21	32-37 rev
32-38	32-35	32-13
32-43	32-41	32-19 rev
32-53	32-49	32-25
32-55	32-71	32-6
33-9	33-8	34-9 rev
33-17	33-17	34-19 rev
33-23	33-25	34-27
33-24	33-24	34-24
33-25	33-23	34-25 rev
33-34	33-33	34-35
33-41	33-39	34-39
33-43	33-43	34-41
33-51	33-49	34-47 rev
33-55	33-53	34-51 rev
33-66	33-62	34-58
33-70	33-66	34-65
35-8	35-8	36-6 rev
35-13	35-13	36-9
35-15	35-17	36-17 rev
35-23	35-25	36-20 rev
35-27	35-27	36-21
35-33	35-31	36-25
35-53	35-55	36-39
35-71	35-69	36-43
35-75	35-75	36-49
35-81	35-81	36-57
35-87	35-91	36-53
35-96	35-110	34-57
35-121	35-121	36-29 rev
35-123	35-123	36-52
36-10	36-65	37-6 rev
36-17	36-13	37-11 rev
36-21	36-17	37-15
36-25	36-21	37-19
36-39	36-33	37-31
36-41	36-35	37-32
36-51	36-41	37-37 rev
36-52	36-44	37-40
36-64	36-54	37-52 rev
36-69	36-59	37-56
36-73	36-63	37-61 rev

36-94	36-68	37-26 rev
36-91	36-69	37-41
38-11	38-11	39-15
38-19	38-21	39-27
38-25	38-23	39-30
38-30	38-28	39-34 rev
38-32	38-30	39-36
38-35	38-35	39-44 rev
38-45	38-43	39-57 rev
38-53	38-50	39-64
38-61	38-57	39-71
38-62	38-58	39-73 rev
38-64	38-60	39-78 rev
38-69	38-63	39-79 rev
38-73	38-69	39-58
39-11	39-11	40-12 rev
39-14	39-14	40-16
39-24	39-20	40-26
39-25	39-21	40-27 rev
39-43	39-37	40-51
39-44	39-36	40-44 rev
39-48	39-40	40-47 rev
39-51	39-45	40-55
39-54	39-48	40-58
39-56	39-50	40-13 rev
39-58	39-52	40-22 rev
39-60	39-54	40-15

