

Suggested Weekly Assignments

Notes

- The book includes more material than you could cover in a one-semester course, so you will need to pick and choose sections and chapters to cover. Of course, if you only cover some of the sections we list in a particular homework assignment, mix and match the problems from different sections to make your assignments. This may require adding or subtracting some problems to make the length of the assignment appropriate.
- Each of these assignments is a mix of longer calculation problems with conceptual questions or very short calculations. Instead of giving the entire assignment as a weekly problem set, you could pull some of these shorter problems out for students to do just before or after a lecture on the appropriate topic.
- These assignments do not include any computer problems (marked in the book with a computer icon) because not all courses will use them. If you want to incorporate use of computers in your course, we encourage you to look through the problem sets and choose some of those problems to assign instead of some of the ones below.

Weekly assignment - Sections 1.1-1.3

Section 1.1 (pg. 6): 2, 7, 12

Section 1.2 (pg. 19): 3, 25

Section 1.3 (pg. 32): 1, 5, 16, 21

Extra Credit: Section 1.3, Problem 22

Weekly assignment - Sections 1.4-2.1

Section 1.4 (pg. 42): 1, 2, 12

Section 1.5 (pg. 48): 4, 7, 16

Section 2.1 (pg. 58): 15, 23

Extra Credit: Section 2.1, Problem 22

Weekly assignment - Sections 2.2-2.5

Section 2.2 (pg. 69): 10, 15

Section 2.3 (pg. 79): 3, 24

Section 2.4 (pg. 93): 6, 17

Section 2.5 (pg. 103): 9

Extra Credit: Section 2.4, Problem 13

Weekly assignment - Sections 3.1-3.3

Section 3.1 (pg. 114): 5, 27

Section 3.2 (pg. 123): 3, 10

Section 3.3 (pg. 133): 1, 4

Extra Credit: Section 3.3, Problem 13

Weekly assignment - Sections 3.4-3.6

Section 3.4 (pg. 145): 1, 11, 27

Section 3.5 (pg. 157): 5, 9, 13

Section 3.6 (pg. 165): 1, 2

Extra Credit: Section 3.5, Problem 8

Weekly assignment - Sections 4.1-4.2

Section 4.1 (pg. 180): 4, 23, 25

Section 4.2 (pg. 189): 4, 9, 17, 20

Extra Credit: Section 4.2, Problem 26

Weekly assignment - Sections 4.3-4.4

Section 4.3 (pg. 198): 3, 12, 15, 16

Section 4.4 (pg. 207): 6, 14, 19

Extra Credit: Section 4.4, Problem 9

Weekly assignment - Sections 5.1-5.2

Section 5.1 (pg. 215): 1, 2, 4, 13

Section 5.2 (pg. 223): 2, 12, 16, 18

Extra Credit: Section 5.1, Problem 14

Weekly assignment - Sections 5.3-5.4

Section 5.3 (pg. 231): 1, 13, 15

Section 5.4 (pg. 240): 10, 17

Extra Credit: Section 5.3, Problem 8

Weekly assignment - Sections 5.5-5.6

Section 5.5 (pg. 247): 5, 14, 15, 19

Section 5.6 (pg. 255): 4, 11

Extra Credit: Section 5.6, Problem 8

Weekly assignment - Sections 6.1-6.3

Section 6.1 (pg. 266): 16, 17, 21, 22

Section 6.2 (pg. 276): 7, 15

Section 6.3 (pg. 284): 11, 13

Extra Credit: Section 6.2, Problem 11

Weekly assignment - Sections 6.4-6.6

Section 6.4 (pg. 292): 11

Section 6.5 (pg. 302): 5, 17, 19

Section 6.6 (pg. 311): 1, 7

Extra Credit: Section 6.6, Problem 8

Weekly assignment - Sections 7.1-7.2

Section 7.1 (pg. 321): 1, 7, 8

Section 7.2 (pg. 328): 16, 19, 28

Extra Credit: Section 7.2, , Problem 10

Weekly assignment - Sections 7.3-7.4

Section 7.3 (pg. 336): 2, 3, 4, 10

Section 7.4 (pg. 342): 8, 12, 19, 24

Extra Credit: Section 7.4, Problem 5

Weekly assignment - Sections 7.5-7.7

Section 7.5 (pg. 351): 6, 8

Section 7.6 (pg. 358): 3

Section 7.7 (pg. 364): 1, 3, 11

Extra Credit: Section 7.6, Problem 8

Weekly assignment - Sections 8.1-8.4

Section 8.1 (pg. 372): 1, 2

Section 8.2 (pg. 381): 3, 13, 16

Section 8.3 (pg. 388): 1, 8

Section 8.4 (pg. 393): 2, 7

Extra Credit: Section 8.2, Problem 10

Weekly assignment - Sections 9.1-9.3

Section 9.1 (pg. 403): 2, 5, 12

Section 9.2 (pg. 408): 2, 5

Section 9.3 (pg. 413): 1, 2, 4

Extra Credit: Section 9.2, Problem 8

Weekly assignment - Sections 10.1-10.2

Section 10.1 (pg. 421): 1, 4, 8, 10

Section 10.2 (pg. 430): 5, 14, 15, 17

Extra Credit: Section 10.2, Problem 16

Weekly assignment - Sections 10.3-10.4

Section 10.3 (pg. 439): 7, 17, 22, 27

Section 10.4 (pg. 450): 10, 18

Extra Credit: Section 10.4, Problem 8

Weekly assignment - Sections 10.5-10.6

Section 10.5 (pg. 462): 4, 7, 17, 18

Section 10.6 (pg. 472): 2, 15, 16, 20

Extra Credit: Section 10.6, Problem 32

Weekly assignment - Sections 10.7-10.8

Section 10.7 (pg. 484): 9, 12, 16

Section 10.8 (pg. 493): 3, 9, 10

Extra Credit: Section 10.8, Problem 23

Weekly assignment - Sections 11.1-11.3

Section 11.1 (pg. 506): 1, 9

Section 11.2 (pg. 513): 2, 4, 5

Section 11.3 (pg. 521): 1, 7

Extra Credit: Section 11.1, Problem 3

Weekly assignment - Sections 11.4-11.7

Section 11.4 (pg. 526): 1, 4

Section 11.5 (pg. 532): 8

Section 11.6 (pg. 540): 4, 8

Section 11.7 (pg. 549): 8, 9

Extra Credit: Section 11.4, Problem 9

Weekly assignment - Sections 12.1-12.2

Section 12.1 (pg. 563): 3, 5, 7, 9

Section 12.2 (pg. 570): 3, 4

Extra Credit: Section 12.2, Problem 7

Note to instructors: If you want to give your students a brief introduction to nuclear physics, consider teaching only Sections 12.1 and 12.2. We've put them in a homework set by themselves to facilitate that option.

Weekly assignment - Sections 12.3-12.5

Section 12.3 (pg. 576): 4, 5

Section 12.4 (pg. 583): 2, 5, 14

Section 12.5 (pg. 591): 5, 10, 13

Extra Credit: Section 12.3, Problem 6

Weekly assignment - Sections 13.1-13.2

Section 13.1 (pg. 602): 2, 3, 4

Section 13.2 (pg. 613): 4, 7, 8

Extra Credit: Section 13.2, Problem 14

Note to instructors: If you want to give your students a brief introduction to particle physics, consider teaching only Sections 13.1 and 13.2. We've put them in a homework set by themselves to facilitate that option.

Weekly assignment - Sections 13.3-13.5

Section 13.3 (pg. 621): 2, 11

Section 13.4 (pg. 630): 8, 9

Section 13.5 (pg. 641): 3, 6

Extra Credit: Section 13.4, Problem 14

Weekly assignment - Sections 14.1-14.2

Section 14.1 (pg. 652): 1, 3, 4

Section 14.2 (pg. 661): 2, 4, 7, 11

Extra Credit: Section 14.1, Problem 7

Note to instructors: If you want to give your students a brief introduction to cosmology, consider teaching only Sections 14.1 and 14.2. We've put them in a homework set by themselves to facilitate that option.

Weekly assignment - Sections 14.3-14.5

Section 14.3 (pg. 669): 5, 11

Section 14.4 (pg. 679): 5, 14, 16

Section 14.5 (pg. 688): 2, 8

Extra Credit: Section 14.3, Problem 8

Weekly assignment - Sections 14.6-14.7

Section 14.6 (pg. 693): 1, 2

Section 14.7 (pg. 702): 1, 8

Extra Credit: Section 14.6, Problem 8