Physics 212 **Classical and Modern Physics** **Spring 2026**

Problem Assignments for Unit 2

Unless otherwise indicated, problems are from Wolfson. "**Supp**" refers to chapters in the supplementary reading and "A" refers to the additional problems that are available at the beginning of the Supplementary Reading booklet.

Assigned Problems for Wednesday, February 18

A23, A24, A25; **CH 27:** 1, 2, 11, 13, 28, 37, 47

Notes: The answer in the back of the book for **Ch 27 #37** has negative signs that are meaningless. Ignore the minus signs.

Answers: Ch 27 #28 $rb/2$.

Assigned Problems for Friday, February 20

A27, A31, A39, A48, A91, X8; **CH 14:** 13, 17; **CH 29:** 13, 23

Notes: Electronic link to problem X8 can be found on the calendar page for Lecture 9.

Hand-In Set #4 Due Monday, February 23, 4:30 pm

A28, X9; **CH 27:** 14, 40, 46, 48; **CH 14:** 14, 16; **CH 29:** 20

Notes: Electronic link to problem X9 can be found on the calendar page for Lecture 9.

Assigned Problems for Wednesday, February 25

A32, A33, A34, A112, X10; **CH 14:** 32, 34, 35; **Supp CH 1:** 1, 2

Notes: Electronic link to problem X10 can be found on the calendar page for Lecture 10.

Answers: CH 14 #32 every 7.5 seconds; **CH 14 #34** (a) 4 m, (b) 14 Hz

Assigned Problems for Friday, February 27

A87, A89, A93ab, A103; **CH 32:** 11, 13, 41; **Supp CH 1:** 5

Hand-In Set #5 Due Monday, March 2, 4:30 pm

A35, A37, A88, A104; **Supp CH 1:** 3, 4, 6; **CH 14:** 36, 70; **CH 32:** 40

Assigned Problems for Wednesday, March 4

A45, A46, X11 (below), X12 (below); **CH 32:** 25, 29, 31; **Supp CH 1:** 7, 9

Problem X11 Light is normally incident on a grating with 10,000 lines/cm. (a) Find the maximum order in which 450 nm light will be visible, and (b) in which 650 nm light will be visible.

Problem X12 For visible light with wavelengths from 400 nm to 700 nm, show that the first-order spectrum is the only one that doesn't overlap with the next higher order.

Answers: X11 (a) 2, (b) 1

Assigned Problems for Friday, March 6

Supp CH 2: 1, 3, 4, 5, 6, 7, 9, 10, 13, 14

Notes: For **Supp CH 2 #5**, answer in both eV/c and kg·m/s.

Hand-In Set #6 Due TUESDAY, March 17, 4:30 pm

A47, A105; **CH 32:** 18, 48; **Supp CH 1:** 8; **Supp CH 2:** 2, 8, 11, 12, 15