

Comparison between Version 19.3 (2025) and Version 19.4 (2026) of “Fundamentals of Physics” Volume I

The following replacements have been made throughout the document: “have to” replaced with “need to”, “has to” replaced with “needs to” or “must”, “in order to” and “in order for” replaced by “to” and “for”, respectively. Some occurrences of “i.e.” were replaced with “meaning that”.

Title	Comments
1. The natural state of things	(20 pages)
2. Multiple forces	(17 pages) Removed quote at end of Puzzle. Clarified the language about net income. Clarified the language about terminal velocity. Side note about terminal velocity was split into three pieces. Removed extra space below footnote xvi
3. Force and motion equation	(19 pages) Replaced “force” with “net force” in checkpoint 3.11.
4. Using the force and motion equation	(16 pages)
5. Forces as interactions	(11 pages) Some wording clarifications.
6. Collisions	(18 pages) Modified the first additional problem to better reflect the content of the chapter.
7. Acceleration and Velocity	(20 pages) Summary and list of terms were updated to include pieces that were inadvertently left in chapter 8.
8. Distance	(13 pages) Summary and list of terms were updated to remove pieces that should have been in chapter 7.
9. Turning Around	(14 pages) Fixed wording of first frequently-asked question.
10. Graphs	Long (23 pages)
11. Oscillations	(14 pages)
12. The law of gravity	(15 pages)
13. Gravitational field strength	(14 pages)
14. Free fall	(18 pages)
15. Gravity with other forces	Long (23 pages) Language clarified for why we do not include motion arrows in a force diagram.
16. Projectile motion	(18 pages) First and third frequently-asked questions were merged.
17. Motion Along Surfaces	(21 pages)
18. Obtaining Component Values	(19 pages)
19. Applications in 2 dimensions	(15 pages) Various clarifications in wording.
20. Circular motion	(17 pages)

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21. Rotational motion	(10 pages)
22. Circular-angular relationships	(17 pages) Added a footnote indicating that the expressions for tangential speed and centripetal acceleration match the expressions for the maximum speed and maximum acceleration during simple harmonic motion.
23. Predicting rotational motion	Long (24 pages)
24. Balance	(12 pages) The figure on page 415 was split into two and the language was streamlined so that the figure for Checkpoint 24.4 is on the same page. Additional wording clarifications.
25. Work and kinetic energy	Long (24 pages)
26. Conservation of energy	Long (22 pages) Removed momentum from description of open and closed systems.
27. Conservation of momentum	(16 pages) Added a footnote explaining how momentum is constant in a closed system.