Required reading list. When a chapter is indicated, it refers to a chapter in the class textbook "Black holes and time warps: Einstein's outrageous legacy" by Kip Thorne. For a given date (e.g., Feb 6), you are to have read the material before that class; an exception is for the Jan 30 class, where no report on that reading is needed as it was the first class.

1. Jan 30: Introduction, and ancient conceptions
   http://en.wikipedia.org/wiki/Aristotelian_physics
2. Feb 6: The scientific revolution; Galileo and Kepler
   http://www.answers.com/topic/scientific-revolution
3. Feb 13: Newton and the concept of mathematical modeling of physics
   http://en.wikipedia.org/wiki/Isaac_Newton
   http://simple.wikipedia.org/wiki/Mathematical_model
   http://en.wikipedia.org/wiki/Mathematical_model
4. Feb 20: Between Newton and Einstein
   http://en.wikipedia.org/wiki/John_Michell and
   http://en.wikipedia.org/wiki/Discovery_of_Neptune and
   http://en.wikipedia.org/wiki/James_Clerk_Maxwell
5. Feb 27: Special relativity: the union of space and time
   http://simple.wikipedia.org/wiki/Special_relativity
   http://en.wikipedia.org/wiki/Special_relativity
   http://en.wikipedia.org/wiki/Thought_experiment
   Chapter 1
6. Mar 5: General relativity and its tests
   http://en.wikipedia.org/wiki/Introduction_to_general_relativity
   http://en.wikipedia.org/wiki/General_relativity
   Chapter 2
7. Mar 12: Midterm; no extra reading
8. Mar 19: Spring break; no extra reading
9. Mar 26: Implications and rejection: black holes and the expanding universe
   http://skyserver.sdss.org/dr1/en/astro/universe/universe.asp
   http://simple.wikipedia.org/wiki/Black_hole
   http://cosmology.berkeley.edu/Education/BHfaq.html
   Chapter 3

10. Apr 2: Do black holes exist? Observations of black holes; how can we rule out alternatives?
    http://en.wikipedia.org/wiki/White_dwarf and
    http://www.astro.umd.edu/∼miller/nstar.html and
    Chapters 4, 5, and 6
11. Apr 9: The mathematical golden age: acceptance, proofs, and evaporation
    http://en.allexperts.com/e/n/no/no_hair_theorem.htm and
    http://en.wikipedia.org/wiki/Hawking_radiation and
    Chapters 7 and 12
12. Apr 16: The influence of black holes on their surroundings
    http://mcdonaldobservatory.org/news/releases/2009/0202.html and
    Chapters 8 and 9
13. Apr 23: Gravitational waves
    http://en.wikipedia.org/wiki/Gravitational_wave and
    Chapter 10
14. Apr 30: The far-out future: wormholes and time machines
    http://en.wikipedia.org/wiki/Wormhole and
    http://en.wikipedia.org/wiki/Time_travel and
    Chapters 13 and 14
15. May 7: Presentation of term projects; no extra reading
16. May 16, 1:30-3:30 PM: final exam; no extra reading