

Foundations of Physical Science, 2022-23 – Bibliography

Highlighted works are valuable overviews of the topics they cover, though some are quite technical.

Note: The fact that I've listed a work here doesn't mean I endorse everything in it—just that I found something useful in it in developing this course.

Course Textbooks

- Harriman, David, *The Logical Leap*, New American Library, 2010
- Rey, H. A., *The Stars: A New Way to See Them* (Updated Edition), Clarion Books, 2016

General Histories, Specialized Topics

- Bennett, Jeffrey et al., *The Cosmic Perspective* (Sixth Edition), Addison-Wesley, 2010
- Cushing, James, *Philosophical Concepts in Physics*, Cambridge University Press, 1998
- Feynman, Richard, “*Surely You’re Joking, Mr. Feynman!*”, Bantam Book, 1986
- Koestler, Arthur, *The Sleepwalkers*, Penguin Books, 1959
- Kuhn, Thomas, *The Copernican Revolution*, Harvard University Press, 1957
- Lindberg, David, *The Beginnings of Western Science*, University of Chicago Press, 1992
- Steel, Duncan, *Marking Time: The Epic Quest to Invent the Perfect Calendar*, John Wiley and Sons, 2000

Egyptian and Babylonian Astronomy and Beliefs

- Frankfort, Henri, et al., *Before Philosophy*, Pelican Books, 1949
- Neugebauer, Otto, *The Exact Sciences in Antiquity*, Dover Publications (2nd Edition), 1969
- van der Waerden, B. L., *Science Awakening II*, Noordhoff International Publishing, 1974

Ancient Greek Science, Astronomy, Philosophy

- Dicks, D. R., *Early Greek Astronomy to Aristotle*, Cornell University Press, 1970
- Dicks, D. R., “Solstices, Equinoxes, & the Presocratics,” *The Journal of Hellenic Studies*, Vol. 86 (1966), pp. 26-40
- Heath, Thomas, *A History of Greek Mathematics*, Clarendon Press, 1921
- Heath, Thomas, *Aristarchus of Samos: The Ancient Copernicus*, Clarendon Press, 1913
- Heath, Thomas, *Greek Astronomy*, Dent and Sons, 1932
- Lloyd, G.E.R., *Early Greek Science: Thales to Aristotle*, W.W. Norton and Company, 1970
- Lloyd, G.E.R., *Greek Science After Aristotle*, W.W. Norton and Company, 1973
- Randall, John Herman, Jr., *Aristotle*, Columbia University Press, 1960
- Rovelli, Carlo, “Aristotle’s Physics: A Physicist’s Look,” preprint:
<https://arxiv.org/abs/1312.4057v2>

Copernicus to Newton

- Caspar, Max, *Kepler*, Dover Publications, 1993
- Cohen, I. Bernard, *Birth of a New Physics*, W.W. Norton and Company, 1985
- Densmore, Dana, *Newton’s Principia: The Central Argument*, Green Lion Press, 2010
- Drake, Stillman, *Galileo at Work*, University of Chicago Press, 1970
- Drake, Stillman, *Galileo: Pioneer Scientist*, University of Toronto Press, 1990
- Hall, A. Rupert, *From Galileo to Newton*, Dover Publications, 1981
- Westfall, Richard, *Never at Rest*, Cambridge University Press, 1980

Primary Sources

- Aristarchus, *On the Sizes and Distances of the Sun and Moon*, reprinted in Heath, Thomas, *Aristarchus of Samos: The Ancient Copernicus*, Clarendon Press, 1913
- Aristotle, *De Caelo (On the Heavens)*, Hackett Publishing Company, 2020
- Copernicus, Nicolaus, *On the Revolutions of the Heavenly Spheres*, Prometheus Books, 1995
- Galilei, Galileo, *Discoveries and Opinions* Anchor Books, 1957
- Galilei, Galileo, *Dialogue Concerning the Two Chief World Systems*, Modern Library, 2001
- Galilei, Galileo, *Dialogues Concerning Two New Sciences*, Prometheus Books, 1991
- Newton, Isaac, *The Principia*, Prometheus Books, 1995
- Ptolemy, *The Almagest*, University of Chicago, 1953