

PHYS 1304 Midterm 1 Review Sheet

The format of the midterm will be much like the quizzes that you have been taking with 10 short answer questions that can include both concepts and mathematics. In many ways they will be like the quiz questions. On thing that will be different from the quizzes is that I will not be providing you with formulas and constants. Instead, you are allowed to bring in a single 8.5x11 sheet of paper with whatever notes you want on it. Obviously, including all the formulas and constants on the sheet will be a high priority. It is also very highly recommended that you bring a calculator as there will be math problems and not having a calculator could slow you down significantly.

The midterm can cover any material that was presented in lecture or in the reading. Below is a list of major topics that we have covered as well as a rough description of what you might be expected to know about those topics. I cannot promise that this list is inclusive, but I have tried to make it as complete as possible.

Perspective on the Universe – You need to know what the structures in our Universe are (solar system, galaxy, Universe) and what the relative scale of each of them is.

Motions of the Earth and Sky – Understand the various motions of the Earth through the Universe. You should also know how these motions manifest in the motion of objects in our sky. This includes not only the stars (including the Sun), but planets and the Moon as well. As you might guess, I could ask you to estimate these motions given certain information or do unit conversions on speeds.

Seasons – Know why we have seasons on the Earth. This is intertwined with the idea of motions. You need to understand the implications of the tilt of the Earth's axis in general.

Astronomy in Ancient Science – Understand why astronomy was significant to ancient people. Know what the Greeks did that was significant to astronomy and the advance of science in general.

Copernican Revolution – Know the major figures in the Copernican revolution and what each did. That includes Kepler's laws which you should be able to both describe and apply.

Modern Science – Know what distinguishes science from non-science and be able to apply that.

Astronomical Time – You need to know the different time periods defined by the motions of the Earth. Understand why there are different ways of defining days, months, years, and times of day. You should also know a little about the history of time keeping and calendars.