

Astronomy 5682 Midterm Review Guide

The midterm exam will be held in class, for the full class period, on Thursday, February 21. You may bring one page of *handwritten* notes (both sides) and a calculator.

The exam will cover material in sections 1-5 of the course notes and chapters 1-6 of the textbook, and any other material that came up in the problem sets (including, for example, the influence of expansion history and curvature on angular sizes and the inference of dark matter from galaxy rotation curves or gravitational lensing).

The most useful things to review are the lecture notes and the solutions to the problem sets. Make sure you read and understand my solution sets, whether or not you did well on the assignment yourself.

When writing down equations for your notes, pay attention to the *physical interpretation* of each equation: what principles does it represent, what are the quantities that enter, what are their units, and how can the equation be used? You don't have to memorize equations, but you do have to know what they mean.

Also pay attention to the empirical evidence for the big bang theory (at the level we have covered so far, especially in §1), to the difference between Newton's and Einstein's theory of gravity and the empirical evidence that favors GR.

The exam will include a mix of qualitative questions and problems to solve.