

Astr/Phys 589: Topics in Theoretical Astrophysics

Fall 2005

Monday – Wednesday 11:00am-12:15pm; PAS 218

• Course Description

This is a survey course of topics in Theoretical Astrophysics. During this class, we will cover the basic elements of fluid mechanics, radiative transfer, nuclear astrophysics, and N-body dynamics. We will aim to develop a basic understanding of these physics topics and also apply it to a number of problems in the forefront of current research.

• Textbooks

There will be no single required or recommended textbook for this class. Instead, we will be using a number of resources, such as chapters in books, review articles, research articles, and the internet to supplement the material that we will discuss in the lectures. A bound set of photocopies of material that we will be using extensively during the class can be purchased from the Academic Support Office PAS260.

• Assignments

There will be 6 homeworks, approximately one every other week, which will account for 30% of the final grade. The homeworks will be due on Wednesdays, at the beginning of class. We will grade a randomly chosen problem from each homework. There will be no credit for late homeworks but you will be able to drop the homework set with the lowest score.

There will be an in-class midterm exam on Monday, October 24, which will include the material covered until that day. The midterm exam will also account for 30% of the final grade.

There will also be a comprehensive take-home final exam, which will account for 40% of the final grade. We will discuss the details of the final exam towards the end of the semester.

A final grade of 90/100 will guarantee an A.

Course Web Site: <http://www.physics.arizona.edu/~dpsaltis/Astr589>

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