

# ASTR 341: Stars and Radiation

## Syllabus: Fall 2016

### Course Description and Prerequisites :

An introduction to, and development of, a firm physical understanding of the observed properties of stars. Topics include the structure of the interior and atmosphere of stars, the transfer of energy by radiation in plasmas, the evolution of stars, and the end stages of stellar evolution, including white dwarfs, neutron stars, black holes and supernovae, with careful attention to the comparison of the predictions with observations.

No prior knowledge of astronomy is assumed. However, basic physics and algebra will be used extensively.

*Prerequisites:* AST 203; PHY 251/252; MAT 203 or 205 or 211 or AMS 261

### Textbook:

The course textbook is "*An Introduction to Modern Astrophysics*" by Carroll & Ostlie.

Scanned copies of the lecture notes, as well as summary slides, will be posted on Blackboard after each topic has been completed.

### Course Requirements and Grading Policy:

Homeworks: There will be regular problem sets, which will be returned graded and with solution set. These homeworks will make up 40% of the final grade. You are welcome to work in groups if you like.

In-class tests: There will be three in-class tests, tentatively scheduled during the first week of October, the first week of November, and the first week of December. Each test will cover about 1/3 of the course material. These tests will make up 30% of your final grade.

Final Exam: A comprehensive final will cover the entire course material, and make up 30% of the final grade.

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