PHYS 381: Introduction to Astrophysics
Spring 2013

Instructor: Aaron Steinhauer
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Office: ISC 217
x5282
Office Hours: Wednesday 9:30 – 10:30am
Thursday 1:30 – 3:30pm
or by drop-in / appointment

Class Meets: MWF 1:30 – 2:20 pm ISC 229
Textbook: *An Introduction to Modern Astrophysics,* by Caroll & Ostlie, 2nd ed.

Exam Schedule: #1 Thursday, February 28
#2 Thursday, April 11
Final Exam: Monday, May 13, 3:30–6:30 pm

Grading Dist.: 30% ~ Weekly Homework
55% Three Exams (18⅓ each)
15% Astrobites participation

Astrobites: Every *Monday* during the semester, we will review one astronomical paper on Astrobites (astrobites.com). I will do the first one, and then subsequent weeks will be taken by teams of two. A short reading quiz will make sure that everyone has read the paper. At the start of class on Monday, the group presenting will give a ~10min presentation on the paper. Discussion will follow. You will be graded on quiz scores, your presentation, and participation in the discussion.

Learning Outcomes – What will you get out of this class?

- A familiarity with the unique notation and nomenclature of astrophysics.
- A basic understanding of stellar structure and evolution
- The ability to construct simple stellar models
- A basic understanding of the structure and evolution of the universe and the observational evidence that supports it.
- A familiarity with astronomical research and journals.

Weekly Schedule (Tentative):

Week #	Date	Topic		Chapter
1	Jan 21*	Light		3
2	Jan 28	Binary Systems & Stellar Parameters		7
3	Feb 5	Classification of Stellar Spectra		8
4	Feb 11	Stellar Atmospheres		9
5	Feb 18	Stellar Structure		10
6	Feb 25	Stellar Structure	Exam #1 Thu.	
7	Mar 4	Star Formation		12
8	Mar 11	Stellar Evolution		13
9	Mar 18	*SPRING BREAK – no classes*		
10	Mar 25	Stellar Evolution		15
11	Apr 1	Stellar Remnants		16
12	Apr 8	Galactic Dynamics	Exam #2 Thu.	24
13	Apr 15	Structure of the Universe		27
14	Apr 22	Cosmology		29
15	Apr 29	Cosmology / Early Universe		30
16	May 6	Early Universe		

* No class on Monday – MLK Day