

GENERAL ASTRONOMY: STARS AND GALAXIES

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I want this to be one of the best courses you ever take, for you to appreciate the amazing nature of the universe we live in, and to learn critical analysis skills that you can apply outside of astronomy throughout your life.

MAIN COURSE GOALS:

1. Encourage a sense of awe and appreciation for the topics investigated in modern astrophysics, such as the origin of the universe, the formation and evolution of the sun and the earth, the nature of space and time, and the search for other planets and life in the universe.

Develop a sense that some topics are so interesting that a student will want to follow them on his or her own

2. Give students an understanding of the scientific method and practice in its use.

Critical thinking, reasoning, and problem-solving skills.

Emphasis on the predicting/testing nature of science.

Group communication skills.

These skills are very useful outside of science classes (*and what employers want to hire!*)

3. Give the learning assistant and myself opportunities to improve our own teaching skills.

SECONDARY COURSE GOALS:

4. Give students a moderately comprehensive introduction to the topics and results of modern astrophysics. (Enough information that they can put into context discoveries they might hear or read about later.)

5. Give students some experience with quantitative reasoning and estimation.

6. Give students practice in the evaluation of real data: understanding measurement error and how to decide if data is trustworthy or not.

This is also useful outside of a science class!