The University of Texas at Tyler
Syllabus
Fall 2025
Introduction to Astronomy
Physics 1303

Instructor: Dr. Randy Back
Classroom: N/A
Class Time: N/A
Office: RBN 4047
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Office Hours: MTWRF 10-11 or by appointment. Please contact me anytime you have questions.
Course Topics: This course is a survey course that will cover the solar system, the life cycle of stars, cosmology, the big bang, dark matter and dark energy. This course satisfies 3 hours of LPS or STEM component of the core.

Text: The textbook is *Cosmic Perspective-With Modified MasteringAstronomy* by Bennett 9th edition.

ISBN-13: 9780136904496

The Pearson website below will allow you to purchase access to mastering astronomy and it will come with an electronic copy of the textbook.

https://www.pearson.com/en-us/subject-catalog/p/cosmic-perspective-the/P200000006931/9780136904496

Prerequisite: None

Homework (HW) : Homework will be done on https://mlm.pearson.com/northamerica/masteringphysics/ . The course ID is back09981. Homework is one of the most important parts of this class. The homework will be due at midnight on Sunday. For example, the homework for chapter 1 will be due by midnight on Sunday August 31. The homework for chapter 2 will be due by midnight on Sunday September 7 and so on.

Tests: There will be a **midterm** and a **final** for this class. The tests will be online on the homework website.

Projects: You will submit two videos' during the semester on an astronomy topic of your choice. The video will be at most 5 minutes long and the topic must be from a section in the book that we are **not** covering. There will be a discussion page on Canvas where you will submit the video. The first video will be due by midnight on October 12. The second video will be due by midnight on December 7. In the video you will explain the topic you've chosen as if you were talking to someone who had no knowledge of Astronomy.

Make-up: No late work will be accepted. If you have an excused absence you must make up the work before the due date.

Grading: The components of your final grade are given below

Final – 35 %
Midterm- 35 %
Homework – 20%
Projects – 10%

Your final letter grade will be given based on the following percentages: A (90%-100%), B (80%-89%), C (70%-79%), D (60%-69%),F (<60%).

A complete description of student's rights and responsibilities are listed on the Canvas page for this course.

The Census Day is September 8
Last Day to withdraw from a course is November 3rd

Course Objectives/Student Learning Outcomes

1. The student should be able to discuss the formation of the solar system and the observations that led to our current understanding of the formation of the solar system.
2. The student should be able to discuss the life cycle of a Star.
3. The student should be able to describe the evidence for the Big Bang.
4. The student should be able to explain the significance of dark matter and dark energy.

General Course Information

1. You are responsible for all the material in the chapters we cover.
2. Science builds on itself. It is very important that you do not fall behind on the material.
3. It might be necessary to reread sections of the book if you don't understand something. If you do not understand the material in the book you will not understand the material on the tests.
4. It is very important that you spend time reading the material and doing the homework.
5. **I strongly encourage you to ask questions.**

Schedule

August 25-Aug. 31 Chapter 1: A modern view of the Universe

Sept. 1-Sept. 7 Chapter 2: Discovering the Universe for yourself

Sept. 8-14 Chapter 3: The science of astronomy

Sept. 15-21 Chapter 4: Making sense of the universe: Understanding motion, energy, and gravity

Sept. 22-28 Chapter 5: Light and matter: reading messages from the cosmos

Sept. 29-Oct. 5 Chapter 7: Our Planetary system

Oct. 6-12 Chapter 8: Formation of the solar system and first project

Oct. 12-14 **Midterm**

Oct. 13-19 Chapter 14: Our Star

Oct. 20-26 Chapter 15: surveying the stars

Oct. 27-Nov. 2 Chapter 16: star birth

Nov. 3-Nov. 9 Chapter 17: star stuff

Nov. 10-16 Chapter 19: our galaxy and Chapter 20: galaxies and the foundation of modern cosmology

Nov. 17-23 Chapter 22: the birth of the universe

Nov. 24-Nov. 30 Thanksgiving

Dec. 1-Dec. 7 Chapter 23: dark matter, dark energy, and the fate of the universe and second project

Dec. 7-9 **Final**