

**ASTR 1000—Survey of Astronomy**  
**Three Semester Hours**

CB  
04/13

**PREREQUISITES:**

None

**COURSE OVERVIEW:**

General introduction to astronomy, with emphasis on the structure of the universe beyond our solar system. Topics include historical astronomy, the sun, stars, galaxies, interstellar matter, black holes, the “Big Bang” theory, and the evolution of the universe. No prerequisite, but familiarity with basic algebra and geometry is beneficial.

**METHODS OF COURSE INSTRUCTION:**

All material for this course is print-based. Instructor and students communicate and exchange materials through postal mail.

**E-PRINT OPTION:**

In this course, an option exists to use e-mail to submit your lesson assignments. Your assignment will be returned to you either as an e-mail attachment or as a hard copy sent through the postal mail, depending on the preferences of the instructor and/or program.

**TEXTBOOKS AND SUPPLIES:**

Seeds, Michael and Dana Backman. *Horizon: Exploring the Universe*. 12<sup>th</sup> ed. Brooks/Cole. [ISBN-13: 9781111430207]

This is the same book that is used at Ohio University for our general astronomy courses.

**NUMBER OF LESSONS:**

The course has 12 lessons, including one midcourse examination and one final examination. These lessons include:

- Lesson 1: Chapter 1: Here and Now; Chapter 2: A User’s Guide to the Sky
- Lesson 2: Chapter 3: Cycles of the Sun and Moon; Chapter 4: The Origin of Modern Astronomy
- Lesson 3: Chapter 5: Light and Telescopes; Chapter 6: Atoms and Spectra
- Lesson 4: Chapter 7: The Sun; Chapter 8: The Family of Stars
- Lesson 5: Chapter 9: The Formation and Structure of Stars; Review for Midcourse
- Lesson 6: Midcourse Examination Preparation

- Lesson 7: Chapter 10: The Death of Stars; Chapter 11: Neutron Stars and Black Holes
- Lesson 8: Chapter 12: The Milky Way; Chapter 13: Galaxies: Normal
- Lesson 9: Chapter 13: Galaxies: Active; Chapter 14: Modern Cosmology
- Lesson 10: Chapter 15: The Origin of the Solar System; Chapter 16: Earth and Moon; Chapter 17: Mercury, Venus, and Mars; Chapter 18: The Outer Solar System
- Lesson 11: Chapter 19: Meteorites, Asteroids, and Comets; Chapter 20: Astrobiology: Life on Other Worlds; Afterword
- Lesson 12: Final Examination Information

### **TYPES OF WRITING ASSIGNMENTS:**

These submitted lessons can be done on your own using an open-book format—that is, you can use the book and other class material to help you answer the questions. This is designed to help you learn as you study the material.

The writing assignment questions are also in multiple-choice format. You do not need to rewrite the actual questions, so fill out the answer sheet provided at the end of each lesson and send it in. If, however, you have an additional concern about any of the questions or the answer choices given, please send along a note. If you do not understand the question, I might be able to correct any misunderstandings that you have on the material, and perhaps reword the question in the next edition of this course manual.

Just write as legibly as you can and please leave enough extra space on each page so that I can make comments and/or corrections as needed. Also, I prefer that you do not use paper torn from a spiral-bound notebook. These pages are very hard to handle while grading. Either plain or lined paper, 8½ by 11 inches is fine. For this course you will probably only be using the answer sheets provided at the end of each lesson, unless you have questions or need to send additional comments to me.