

ASTRONOMY 120
Highlights of Astronomy
Fall Quarter 2010

INSTRUCTOR: Dave Meyer
OFFICE: Dearborn Observatory #6 (491-4516)
EMAIL: davemeyer@northwestern.edu
OFFICE HOURS: MWF 12:30 - 1:30 PM

TA: Sean Cornelius
OFFICE: Tech F324 (491-4602)
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OFFICE HOURS: MTh 3:00 - 4:00 PM

LECTURES: MWF at 2:00 – 2:50 PM in Tech LR2
TEXTBOOK: *The Cosmos: Astronomy in the New Millenium (3rd Ed.)*
(Pasachoff & Filippenko)

MID-TERM EXAM: Monday, Oct. 25, 2010 2 PM Tech LR2 (1 hour)
PAPER DUE: Friday, Nov. 19, 2010 2 PM Tech LR2
FINAL EXAM: Monday, Dec. 6, 2010 9 AM Tech LR2 (2 hours)

Grading Policy

The course grade will be based on the final (45%) and mid-term (25%) exams, the paper (20%), and two “pop” quizzes (10%). The pop quizzes will be given without warning twice in lecture during the quarter. There will be no make-up quizzes. Since only the highest quiz grade will be counted, missing one will not hurt your grade. The exams will consist of multiple choice, short answer, and essay questions. The instructor will schedule review sessions before each exam. In the case of missed exams, make-ups will only be considered under the direst of circumstances and will consist of an oral test.

The Paper

In this course, we will discuss exciting new developments in astronomy. The public usually obtains this information through newspaper and magazine articles in print and online. As an Astro 120 student, you will be in a position to make informed judgments as to the accuracy and reliability of such articles. Your assignment is to find a recent (within the past 6 months) article reporting a new astronomy discovery in a reputable (no tabloids!) publication and critique it. The article you choose should be longer than several paragraphs. In your paper, you will provide some background on the astronomy covered in the article, discuss the importance of this new development, and most importantly, evaluate the accuracy and reliability of the article based on what you have learned in this course. Papers that exhibit the most original thinking and creativity in expression will be viewed most favorably. The finished product should be 4 to 6 double-spaced typewritten pages long and include a xerox copy of the article reviewed. No papers will be accepted after the deadline on Nov. 19, 2010 at 2 PM.

Observing Sessions

There will be evening observing sessions every Wednesday night throughout the quarter utilizing the historic 18.5-inch telescope in the Dearborn Observatory. If the weather cooperates, you will have an opportunity to view the Moon, planets, nebulae, etc. If not, the TA on duty will give you an entertaining tour of Dearborn. Either way, you will be exposed to interesting information not easily discussed in a lecture setting. Attending at least one of these sessions during the quarter is strongly encouraged and will be of help on the final exam. Since we can accommodate only a limited number of students per session, a prior sign-up will be in effect after lecture each Wednesday for that night's observing. **DON'T WAIT UNTIL THE END OF THE QUARTER.** The instructor will inform you where and when to meet for the sessions.

Course Outline

Introductions (Sep. 22, 24)

Read Chapter 1

Light (Sep. 27, 29, Oct. 1)

Read Chapters 2, 3

The Sky (Oct. 4, 6)

Read Chapter 4

The Solar System (Oct. 8, 11, 13)

Read Chapters 5, 8

Stars (Oct. 15, 18, 20, 22)

Read Chapters 10, 11, 12

Review Session: Thursday, Oct. 21, 2010 8 PM Tech LR2

Mid-Term Exam: Monday, Oct. 25, 2010 2 PM Tech LR2

White Dwarfs, Pulsars, and Black Holes (Oct. 27, 29, Nov. 1)

Read Chapters 13, 14

The Milky Way, Galaxies, and Quasars (Nov. 3, 5, 8, 10)

Read Chapters 15, 16, 17

Cosmology (Nov. 12, 15, 17, 19)

Read Chapters 18, 19

Paper Due: Friday, Nov. 19, 2010 2 PM Tech LR2

Life in the Universe (Nov. 22)

Read Chapter 20

Review Session: Friday, Dec. 3, 2010 2 PM Tech LR2

Final Exam: Monday, Dec. 6, 2010 9 AM Tech LR2