

A200 Introduction to Cosmology

Indiana University Northwest

Text: *The First Three Minutes*, by Steven Weinberg

Prerequisites: None

Goal: To understand conceptually what the scientific picture of the Universe looked like 13.8 billion years ago.

Grades: There will be regular homework (only the best five count), four midterm exams (partially cumulative, no make-up exams, the lowest score is dropped), and one final exam (cumulative, no make-ups). There will also be some in-class extra credit exercises. Grades will be posted on Oncourse (course 1763): <https://oncourse.iu.edu/portal>. The class will be graded on a curve. The percentages of the total grade from the various components are as follows:

Homework: 20%

Best Midterm: 20%

2nd Best Midterm: 20%

3rd Best Midterm: 20%

Final: 20%

Extra Credit: 2%

Homework: Print out the homework assignments from Oncourse and turn them in during class. Though only the best five homework scores count towards the grade, it is in your best interest to complete them all as they are like practice for the exams. Solutions will be posted on Oncourse after the due date.

Movie Days and Cosmolaboo! There are two movie days and two Cosmolaboo game days. Extra credit is given for the movie days by completing the worksheet posted on Oncourse. Extra credit is given for Cosmolaboo according to your team's placing in the game.

Exams: The exam schedule is on the next page. Exams will be based on the homework, lectures, book, and online notes and slides that are available on Oncourse (under Resources). The homework will consist of questions similar to those given on exams.

Readings: A tentative reading schedule is shown on the next page. Look over these chapters of the book, online notes, and slides (available through Oncourse under Resources) before each lecture. The book is a very good introductory account of modern cosmology for non-science majors. It is somewhat outdated in spots so notes are provided (Resources/Notes) which are largely based on the outline of the book, with some extra material presented, along with updates.

Math Lab: Walk in tutoring for math: 436 HH, (219) 980-6979.

A200 Introduction to Cosmology, Indiana University Northwest, Fall 2015

Exam dates, tentative reading schedule and schedule of lecture topics		
Week	Tuesday: Reading	Thursday: Reading
1	Aug. 25: Movie Day!	Aug. 27: Ch 0: Preliminaries
2	Sept. 1: Ch 1: Introduction	Sept. 3: Cosmolaboo!
3	Sept. 8: Test Review: Ch 0,1	Sept. 10: MIDTERM EXAM 1
4	Sept. 15: Ch 2: Expansion	Sept. 17: Ch 2: Expansion
5	Sept. 22: Ch2: Expansion	Sept. 24: Ch 2: Expansion
6	Sept. 29: Test Review: Ch 2	Oct. 1: MIDTERM EXAM 2
7	Oct. 6: Ch 3: CMBR	Oct. 8: Ch 3: CMBR, Ch 4: Recipe
8	Oct. 13: Ch 4: Recipe	Oct. 15: Cosmolaboo 2!
9	Oct. 20: Test Review: Ch 3-4	Oct. 22: MIDTERM EXAM 3
10	Oct. 27: Ch 5: 1 st Three Minutes	Oct. 29: Ch 5: 1 st Three Minutes, Ch 6: Historical Interlude
11	Nov. 3: Ch 7: 1 st Hundredth Second	Nov. 5: Ch 7: 1 st Hundredth Second
12	Nov. 10: Test Review: Ch 5,6,7	Nov. 12: MIDTERM EXAM 4
13	Nov. 17: Ch 8: Epilogue: Fate	Nov. 19: Ch 9: Afterward: Inflation
Nov. 22 – 29: FALL BREAK!!!!!!!!!!!!		
14	Dec. 1: Movie Day!	Dec. 3: Ch 10: String Theory
15	Dec. 8: FINAL REVIEW, Cumulative	Dec. 10: FINAL REVIEW, Cumulative
FINALS		Dec. 17: FINAL EXAM, Cumulative

Disability Policy: If you need assistance with a learning, physical, or psychological disability that may affect your academic progress, please contact the Disability Services Coordinator at 219-980-6942, HH 237.

Attendance: Attendance is required. If you do not attend, you may be withdrawn from the course. This course has been approved to enforce the IU Northwest Attendance and Course Commitment Policy and the full text of this policy is available at: <http://www.iun.edu/registrar/attendance-policies.htm>. Students who do not actively participate may be administratively withdrawn from the course, which may have an impact on financial aid awards and/or student visa status. I define active participation as coming to lectures and completing the homework and exams at least 50% of the time.