HONORS 3900 - Honors Colloquium

The History of Cosmological Thought

Course Outline - Spring Semester 2007

INSTRUCTORS: Dr. Brad Carroll    Dr. Bob Mondi
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TEXTS:

- The Book of the Cosmos, Imagining the Universe from Heraclitus to Hawing, Dennis Danielson (ed.)
- Big Bang, Simon Singh

Science and math background assumed: none!

OUTLINE

Cosmology is the study of the universe on the grandest scale. How did the world come to be, what is it like, and how does it work? We will examine the ideas of western cosmology, from the ideas of the presocratic philosophers to the theories of modern cosmology.

The course will use a seminar format based on the readings assigned for that day. Your grade will be based on your assigned classwork, attendance, and class participation. You should email a list of three questions about the assigned reading before 10 am on class days. A few papers on selected topics will be assigned during the semester. Several short assignments or observing projects will also be required. A final project is required, and must be approved by March 22 by the instructors. You will present your project to the class during the last week of the semester.

OFFICE HOURS

Brad: 10:00 - 11:00 Daily
       and
       any other time I am in my office

Bob: All day
SCHEDULE AND READING ASSIGNMENTS

Week 1
Jan  9  Course introduction
      11  *Cosmos*, #1 - 4, p. 1 - 30

Week 2
Jan 16  *Cosmos*, #5 & 6, p. 31 - 42
      18  *Cosmos*, #7 - 10, p. 43 - 65; *Big Bang*, p. 1 - 27

Week 3
Jan 23  St. Augustine, *Confessions*, Book XI
      25  *Cosmos*, #11 - 17, p. 68 - 101; *Big Bang*, p. 28 - 33

Week 4
Jan 30  *Cosmos*, #18 - 20, p. 104 - 127
      Feb  1 *Cosmos*, #21 - 23, p. 128 - 144

Week 5
Feb  6  *Cosmos*, #24 & 25, p. 145 - 162; Galileo, *Letter to the Grand Duchess Christina*
      8   *Cosmos*, #26, p. 163 - 172; *Big Bang*, p. 47 - 75

Week 6
Feb 13  *Cosmos*, #27 - 33, p. 173 - 219
      15  *Cosmos*, #34, p. 220 - 228

Week 7
Feb 20  *Cosmos*, #35 - 40, p. 229 - 258
      22  *Cosmos*, #41 - 43, p. 259 - 276; *Big Bang*, p. 75 - 83

Week 8
Feb 27  *Big Bang*, p. 85 - 116; *Cosmos*, #59, p. 366 - 370
      March  1 *Big Bang*, p. 116 - 143

Week 9
March  6  *Cosmos*, #58, 60, 63, p. 356 - 365, 371 - 379, 390 - 393
      8   *Big Bang*, p. 144 - 163

March 13  *Spring*
      15  *Break*

Week 10
March 20  *Big Bang*, p. 165 - 229
      22  *Cosmos*, #44 - 46, 48 - 50, 53, p. 277 - 293, 298 - 311, 326 - 332
Week 11
March 27  Big Bang, p. 229 - 263; Cosmos, #52, 61, 62, 64, p. 317 - 325, 380 - 389, 394 - 400
29  Big Bang, p. 265 - 355; Cosmos, #67, p. 411 - 415

Week 12
April 3  Big Bang, p. 357 - 437; Cosmos #72, 74, p. 433 - 437, 448 - 451
5  Big Bang, p. 437 - 463, Cosmos #47, 76, p. 294 - 297, 460 - 463

Week 13
April 10  Alpha and Omega, Ch. 5, p. 63 - 89
12  Big Bang, p. 469 - 493; Cosmos #73, 79, 81, p. 438 - 447, 482 - 487, 498 - 505

Week 14
April 17  Cosmos, #77, 78, 83, 84, 85, p. 464 - 481, 510 - 528; Weinberg, A Designer Universe?
19  Course wrap-up

Week 15
April 24  Presentation of course projects
26  Presentation of course projects