

**Phil/LPS 140/240: Inheritance Systems  
Course Syllabus**

**Instructor:**

Simon Huttegger (shuttegg@uci.edu)

Office SST 785 – Office hours: Monday, 9-10 am, Wednesday 9-11 am

**Course description:** Heredity, or inheritance, is a major theme in evolutionary biology and is one of the basic prerequisites for evolutionary change. Since evolution can happen on many levels of biological organization – from the genome to culture – questions are raised as to the similarity and differences between the inheritance systems on these levels. These questions touch several core issues of the foundations and philosophy of evolutionary biology.

**Required Course Texts:**

- Eva Jablonka and Marion Lamb: 'Evolution in Four Dimensions'. MIT Press, 2005
- Some additional texts which will be posted online

**Undergraduate Requirements:**

- You are expected to read the material for each class in advance.
- There will be a homework assignment about the class reading to be handed in before each class (18 homework assignments total).
- You will have to write two short papers on the readings (4-6 pages). The first one is due by the end of week 5, the second one by the end of week 10.
- You will prepare one short presentation at the end of the quarter (see list below).
- Class participation and regular attendance is expected.
- Violation of academic integrity, including plagiarism, will result in failing the course and a letter to the Dean.
- Grades: Homeworks 40%, first paper 20%, second paper 30%, presentation 10%

**Graduate Requirements:**

Presentation of the material from J&L *Evolution in Four Dimensions*

For letter grade, standard seminar paper is expected.

**Tentative Schedule:**

**March 30** Course introduction

**April 1-2** Jablonka & Lamb *Transformations of Darwinism* pp. 5–46

**April 8** Jablonka & Lamb *From Genes To Characters* pp. 47–78

**April 13** Jablonka & Lamb *Genetic Variation: Blind, Directed, Interpretive?*  
pp. 79–108

**April 15-20** Jablonka & Lamb *The Epigenetic Inheritance System* pp. 109–  
154

**April 22** Wagner *Paul Kammerer's Midwife Toads*, Vargas *Did Paul Kammerer Discover Epigenetic Inheritance?*

**April 27-29** Jablonka & Lamb *The Behavioral Inheritance System* pp. 155–  
194

**May 4-6** Jablonka & Lamb *The Symbolic Inheritance System* pp. 193–232

**May 11** Jablonka & Lamb *Genes and Epigenetic System* pp. 233–244

**May 13** Jablonka & Lamb *Genes and Behavior, Genes and language* pp. 285–  
318

**May 18** Jablonka & Lamb *Lamarckism evolving* pp. 319–354

**May 20-25, June 1-3** Behavioral and Brain Sciences (2007), 353–392, Jablonka  
& Lamb *A last Dialogue*, pp. 355–385

No class on **May 27**

There might be slight changes to this schedule as we go along

**List of commentaries (May 20-25, June 1-3):**

Blackmore *Those dreaded memes: The advantage of memetics over “symbolic inheritance”*

Brace *Genetics and the control of evolution*

Bridgeman *One-generation Lamarckism: The role of environment in genetic development*

Dickens & Dickens *Designed calibration: Naturally selected flexibility, not non-genetic inheritance*

Faulkes & Baines *Evolutionary string theory*

Foss *Only three dimensions and the mother of invention*

Gabora *epigenetic and cultural evolution are non-Darwinian*

Hamame, Cosmelli & Aboitiz *What is so informative about information*

Lappan & Choe *Evolution in the symbolic dimension: The devil is in the details*

Mesoudi *Extended evolutionary theory makes human culture more amenable to evolutionary analysis*

Sloman & Chappell *Computational cognitive epigenetics*

Steels *Is symbolic inheritance similar to genetic inheritance*

Warlaumont & Dale *The missing chapter: The interaction between behavioral and symbolic inheritance*

Jablonka & Lamb *Author's Response*